Volume VIII, No. 9 66 September, 1932

SOAP

with which is included an

Insecticide & Disinfectant Section

Published by MACNAIR-DORLAND COMPANY, INC., 136 Liberty Street, New York

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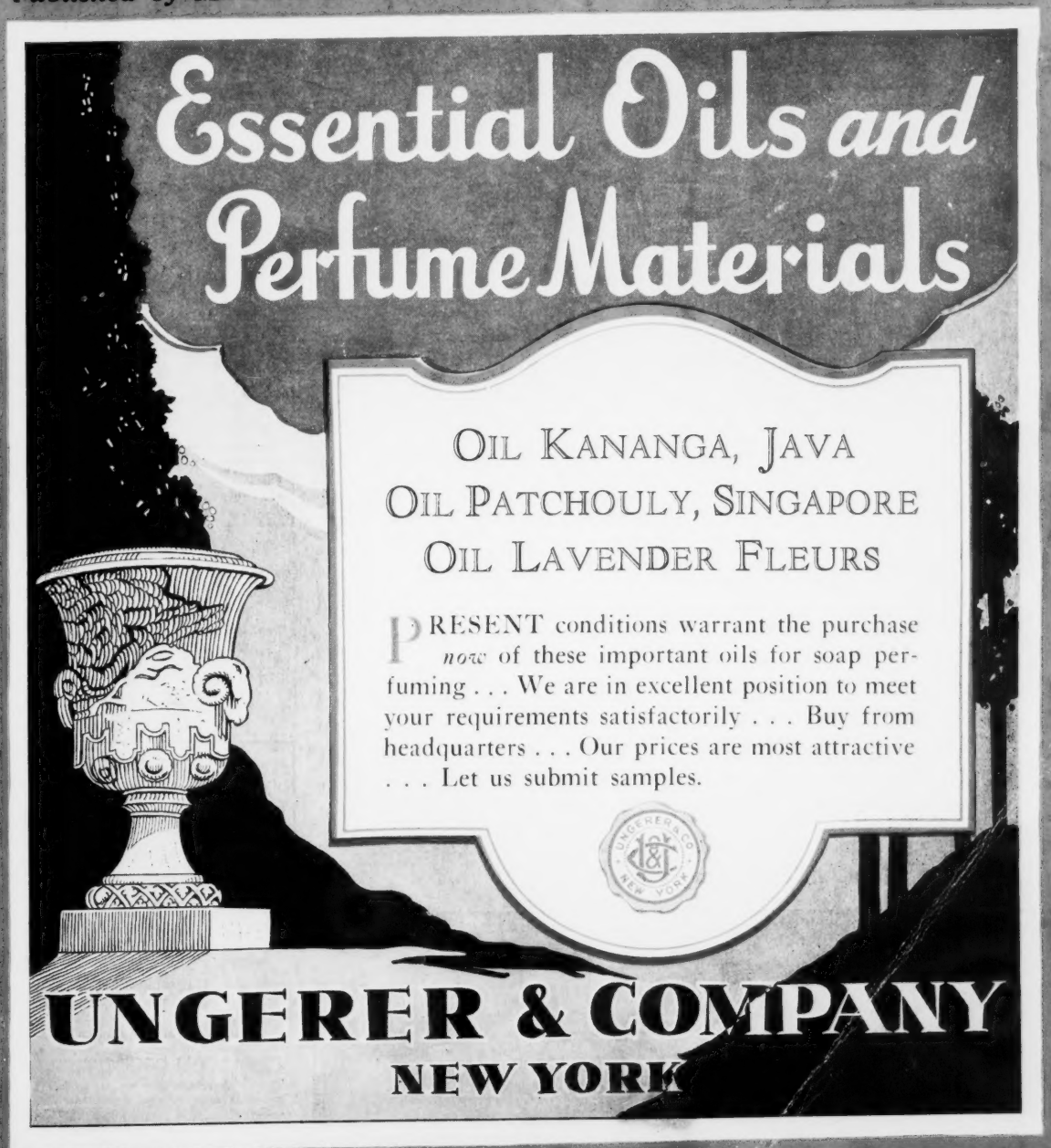
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OIL KANANGA, JAVA
OIL PATCHOULY, SINGAPORE
OIL LAVENDER FLEURS
PRESENT conditions warrant the purchase *now* of these important oils for soap perfuming . . . We are in excellent position to meet your requirements satisfactorily . . . Buy from headquarters . . . Our prices are most attractive . . . Let us submit samples.
UNGERER & COMPANY
NEW YORK

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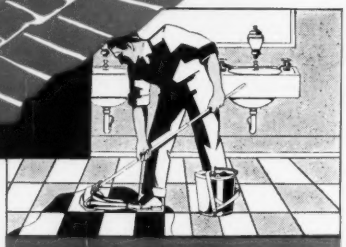
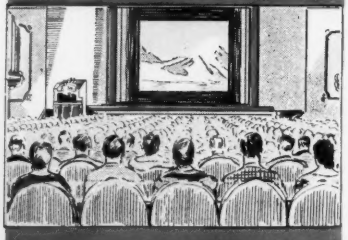
SCIENTIFIC control of manufacturing operations in the Falcon plant assures utmost economy of production, absolute dependability and uniformly high quality. *When quality products are available at competitive prices your sales problems are simplified.* You can meet all competition, yet supply your customers with better products for each requirement. *Get our latest price list and ask for samples.*



● **FLOOR DEPARTMENT**
Let our Floor Department help you select the right floor compound, liquid wax or treatment for your modern floors.

● **FALCON LIQUID SOAP**
We manufacture all grades of liquid soap and shampoo. Soap dispensing equipment furnished at actual cost.



● **FALCON DEODORIZERS**
These air-sweetening blocs and crystals maintain sanitary and wholesome air conditions.

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SOAP CORPORATION
735 E. JACKSON BLVD., CHICAGO, ILL.

PURIFY BY ADSORPTION!

Nothing can equal a truly superior activated carbon in economy and effectiveness for separating from liquids impurities which do not yield to ordinary methods of treatment.

Odor-producing compounds, color bodies, colloidal impurities—in tallows, oils, glycerine, solutions of aromatic chemicals, solvents, etc.—can be readily removed by adsorption with surprisingly small percentages of DARCO.

Write Dept. "S" for a free sample—try it on your process liquids. A simple laboratory test will point the way to higher purities—better products at lower cost.

This Trade-mark DARCO *On Every Carton*

DARCO SALES CORPORATION

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Telephone: VAnderbilt 3—1592

Cable Address: DARCOSALE, NEW YORK

Say you saw it in SOAP!

TEMPERATURES VARY

WEATHER RECORDS
Official Temperatures
3 AM....66 | 12 M.....73 | 6 PM.....82
6 AM....61 | 1 PM.....76 | 7 PM.....80
8 AM....63 | 2 PM.....79 | 8 PM.....76
9 AM....65 | 3 PM.....83 | 9 PM.....75
10 AM....69 | 4 PM.....82 | 10 PM.....74
11 AM....72 | 5 PM.....83
Average temperature yesterday, 72.
Average same date last year, 76.
Average same date for 46 years, 75.
High yesterday, 83 at 5 PM; low, 61 at 6 AM.

MAKE COMPLETE FORMULAE CONTROL A REALITY—MAIL COUPON FOR SAMPLES AND PRICES OF THESE DU PONT AROMATICS

BUT NOT THESE DU PONT AROMATICS

Their chemical purity and absolute uniformity are assured day in and day out. Complete laboratory control in manufacture sees to that.

GERANIOL EXTRA

The distinguishing features of this du Pont Aromatic are its uniformity, its freedom from any sharp by-odors and its delicate rose-like odor. Improved processes of manufacture and the most highly skilled technical direction insure its chemical purity.

BENZOPHENONE CRYSTALS

These du Pont crystals are absolutely stable and will not discolor. They are an excellent fixative. And embody the clear, fresh odor note of the rose in a pure white crystalline form, and best of all they are priced well within the cost range of any toilet or liquid soap formulae. Du Pont Benzophenone Crystals are characterized by their high boiling point.

CITRAL

A chemically pure aldehyde. It is water-white and free from Methyl Heptenone. Like all du Pont Aromatics—added refinement in its manufacture adds value to your product.

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E. I. DU PONT DE NEMOURS & COMPANY, INC.
FINE CHEMICALS DIVISION
200 WEST BROADWAY, NEW YORK, N. Y.
7 South Dearborn Street, Chicago, Ill.
SOLE DISTRIBUTORS FOR Société Usines Chimiques, Rhône—Poulenc, France

DU PONT
REG. U.S. PAT. OFF.

E. I. DU PONT DE NEMOURS & COMPANY, INC.
Fine Chemicals Division, 260 W. Broadway, New York

Gentlemen. PLEASE SEND ME SAMPLES of your_____
_____ I want to test them for myself. It is understood this does not obligate me in any way.

*Name*_____
*Address*_____
*City*_____ *State*_____

Say you saw it in SOAP!

SOAP

Reg. U. S. Patent Office

with which are included

Insecticide & Disinfectant Section **Production Section**

Volume VIII September, 1932 Number 9

«

INSECTICIDE and Disinfectant Section, which is included as a department of every issue of SOAP, begins on page 71. Oil, Fat & Soap Production Section begins on page 59. These sections contain news, articles and editorial opinion of particular interest to their respective industries.

«

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"BEAMAX"

DRIES TO A LUSTRE

LIQUID WAX

Does Not Require Polishing

"BEAMAX" cuts floor maintenance costs by saving labor—no buffing is necessary on application, and no polishing is required.

"BEAMAX" is easily applied with a cotton mop or lamb's wool applicator. It smooths itself. It dries to a hard, lustrous finish in twenty minutes or less.

"BEAMAX" is long wearing. Finish is easily maintained by buffing; each cleaning increases the lustre. Floors can be washed with clear water without affecting the finish.

"BEAMAX" is recommended for all types of floors—this one wax takes care of linoleum, wood, tile, terrazzo, rubber, asphalt tile, mastic, etc.

"BEAMAX" will not show lap marks when used for "patching" worn spots. It has no odor.

"BEAMAX" is sold in drums, half-drums, and quarter-drums, as well as in 10-gal., 5-gal., and 1-gal. cans. It is a perfect emulsion and will not settle out.

Try "BEAMAX" for yourself. Send coupon for sample and prices.

THE DAVIES-YOUNG SOAP COMPANY

Dayton, Ohio

Copyright 1931 by The Davies-Young Soap Co.

The Davies-Young Soap Co.
Dayton, Ohio

Please send me without charge sample can of "BEAMAX" Dries to a Lustre LIQUID WAX.

Name .....

Address .....

City .....

5 DIFFERENT PACKAGE SIZES

of DU PONT PARA-DICHLOROBENZENE are always available for quick delivery anywhere

WHETHER you order a 25-pound pail, a 200-pound drum, or a carload, you can be assured that du Pont PARA-DICHLORO-BENZENE will be delivered to you anywhere, and promptly.

But quick delivery and 5 sizes of packages are only two of the advantages of du Pont PARA-DICHLOROBENZENE. Three other important reasons why you should make sure your order reads "DU PONT PARA-DICHLOROBENZENE" are:

1. It comes in three handy sizes of crystals . . . large, medium, small.

2. Its uniformity and quality can be relied on at all times.

3. It is backed by the name DU PONT.

Before you place your order, let us quote you prices . . . any quantity . . . on 200, 150, 100-lb. drums, or 50 and 25-lb. pails.

DU PONT
REG. U. S. PAT. OFF.

ORGANIC CHEMICALS

Organic Chemicals Department

E. I. DU PONT DE NEMOURS & COMPANY, INCORPORATED, WILMINGTON, DELAWARE

..BETTER STYLED FOR BIGGER SALES!

Fluid preparations . . whatever products go to market in a CAN . . look out from *front line places* in the store by virtue of a smart display.

Trade ideas of merit are sharpened . . sales result! . . good-will begins! . . where trim CONTAINERS first invite a test of *inner* value.

Style your newest leader! . . or re-style your trade-respected product in EMPECO CANS! Designed to suit in shape and size. Clear-cut labelling in full colors . . Plain CANS too!

METAL PACKAGE CORPORATION
110 E. 42ND ST., NEW YORK CITY
ESTABLISHED 1909
SALES OFFICES AND PLANTS • NEW YORK CITY • BALTIMORE • BROOKLYN • CHICAGO
THE FISCHER CAN COMPANY DIVISION • HAMILTON • OHIO

Say you saw it in SOAP!

ALBERT VERLEY
INCORPORATED

GERANIUM ARTIFICIAL GERANIOLS

for Soap Perfume

With the market for natural geranium oil in its present unsettled condition, the above products should be seriously considered by the soap manufacturer. Both work excellently in soap and will provide the geranium note at a cost which will be reasonable and at the same time stable. May we submit generous working samples?

PERFUME SPECIALTIES

In our laboratories, we have facilities for manufacturing a complete line of compounds for soaps of all kinds, theatre sprays, para products, polishes, fly sprays, etc. Besides our standard perfume specialties, we can make up individual odors to suit your needs. It will cost you nothing to investigate the possibilities of these products. What are your problems?

also headquarters for

RHODINOL-S
IONONE SAVON
MUSCOGENE-S
LABDANUM CLARI-S
IRONE SPECIAL-S

SOAP SPECIALTIES
By Tombarel, Grasse, France

Resinoids

Tombarel Freres produce a complete line of resinoids, all very interesting bodies for soap perfume. Resinoids not only give character to soap odors, but also act as fixatives.

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Oil Vetivert
Oil Geranium

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LOS ANGELES
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Main Office
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CHICAGO
Telephone—SUperior 1203

New York Office
114 East 25th St.
NEW YORK
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Say you saw it in SOAP!

4 WAYS to greater economy in perfuming of SOAPS

● CITROSAS

Powerful, alkali-proof, particularly suitable for hand soaps, laundry soaps, etc.

25 lb. cans. . . . . 45 ¢ per lb.
100 lb. lots . . . . . 40 ¢ per lb.
Drums . . . . . 35 ¢ per lb.

● GERANIUM K. T.

Rosy, Geranium character.

5 lb. bottles . . . . . 2.00 per lb.
50 lb. lots . . . . . 1.75 per lb.
Drums . . . . . 1.25 per lb.

● ROBLE W. No. 2

Heavy Oriental odor, particularly suitable for toilet soap. Get sample and special quotation.

● DULCENE

Three times stronger than Citronella. More pleasant, more economical.

Samples and quotations on request

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Executive Offices and Factory—599 JOHNSON AVE., BROOKLYN, N. Y.

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Stocks Carried in the Following Cities:

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WM. PAUER,
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P. J. RICH,
1282 Folsom St.

CHICAGO, ILL.
M. HARTSTEIN,
1200 No. Ashland Ave.

NEW ORLEANS, LA.
ROBERT E. FELTON,
Balter Bldg., Rm. 407.

Say you saw it in SOAP!

Paradow
Paradow is a strictly pure grade of Paradichlorbenzene — sold under the Dow Trademark — that is widely used by deodorant and sanitary specialty manufacturers because of its remarkable effectiveness and uniformity. ¶ Paradow can be obtained in three grades of crystals (fine, medium and coarse) to satisfy almost any requirement. ¶ To facilitate deliveries, warehouse stocks are carried at strategic shipping centers. ¶ We will gladly quote on your requirements in any quantity.
Other Dow Products
Methyl Anthranilate
Methyl Salicylate
Caustic Soda
Coumarin
Solvents
TRADE
DOW
MARK

THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

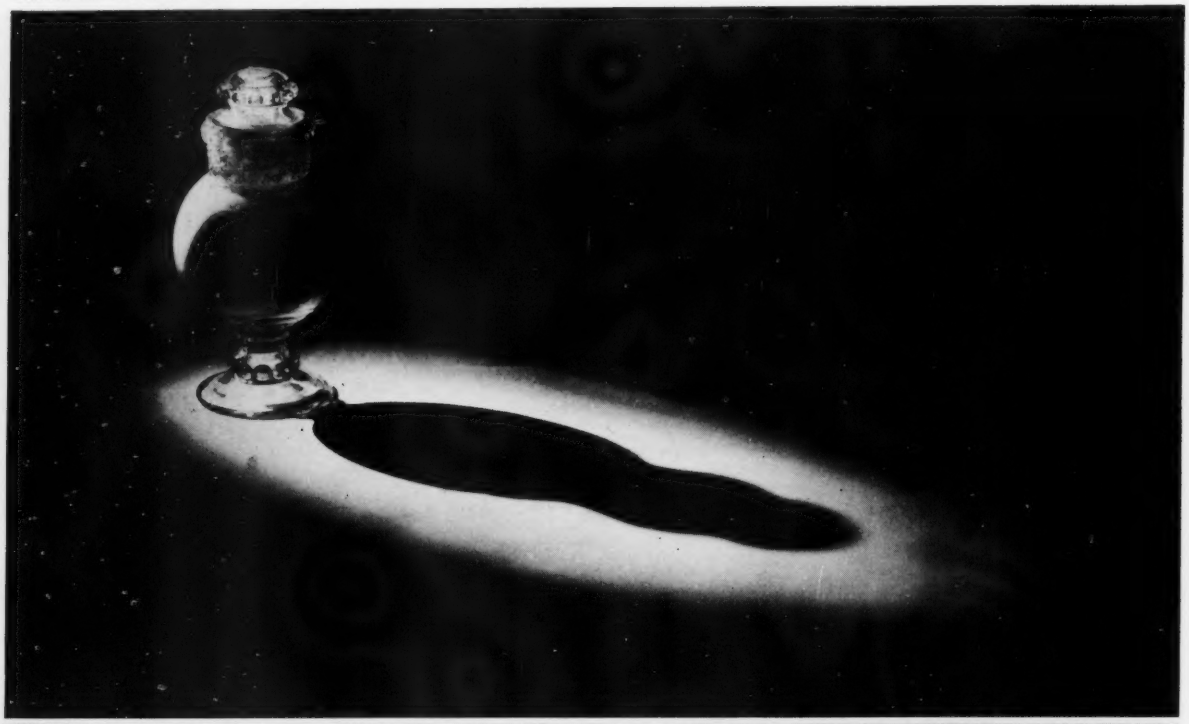
Say you saw it in SOAP!

PHOTOGRAPHIC EXHIBIT OF MONSANTO PRODUCTS

Coumarin Monsanto

Fine soaps have it—a subtle appeal that enhances their saleability. An influential contributing factor is Coumarin Monsanto with its true, delicate odor. In bouquets and flavors it contributes a "note" and carries through. It merits your confidence.

DISPLAY ARRANGED AND PHOTOGRAPHED BY T. KAJIWARA, ST. LOUIS



Monsanto Chemical Works
ST. LOUIS, U.S.A.

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Everett Station BOSTON
500 No. Dearborn CHICAGO
373 Brannan St. SAN FRANCISCO
Victoria Station House, Victoria St. LONDON, S. W. 1

CHEMICALS = QUALITY Monsanto ST. LOUIS, U.S.A.

Monsanto Chemicals

Say you saw it in SOAP!

HERE'S GOOD NEWS, MEN!

"We've added some new Clifton items to our line that will help put sales up where they belong."

IT'S popular these days to try various methods to boost sales. One method that has been successful with sanitary supply jobbers is to ADD a few suitable Clifton items to the present line.

Try this *proven* method. It will enable your salesmen to frequently make extra sales to their regular customers and encourage them to go out after new business too.

Even if you already handle similar items we can probably save money for you—we are doing so for many others. It costs nothing to inquire!

Foamwell Liquid Soap
Liquid Soap Concentrate
Liquid Soap Base
Soap Dispensers
Metal Polish

Pine-Gloss Floor Cleanser
Meteor Oil Soap
Cresolene Disinfectant
Pine Tree Disinfectant
Cresol Compound U. S. P.
Insecticide

Deodorette Cakes
Moth-Di Cakes and Displays
Fragrantaire Blocks and Wall Containers

ATTRACTIVE IMPRINT LABELS FURNISHED

The Best Time to Boost Sales Is Now—Write NOW!

CLIFTON CHEMICAL CO., INC.

Clifton Building

246 FRONT STREET NEW YORK CITY

For the Strength

that is in Unity

GREATER opportunity for service, and the strength that is in unity . . . this is the background of the new AMERICAN CYANAMID & CHEMICAL CORPORATION, for it represents a consolidation of the technical, manufacturing, sales and shipping facilities of long-established, powerful organizations . . . the American Cyanamid Company (Industrial Chemical Division); American Cyanamid Sales Company; Kalbfleisch; Klipstein; Wiarda; Superior Chemical; Fumigators' Supply Co.

Each of these has achieved a name as a great chemical institution in its own right; now, in combination, they bring to every customer a completeness and diversity of service which is unique.

● And the American Cyanamid & Chemical Corporation controls the activities of these companies: American Powder Company, The Selden Company, Structural Gypsum Corporation, Owl Fumigating Corporation, The Kalbfleisch Corporation of Surinam.

American Cyanamid & Chemical Corporation

535 Fifth Avenue, New York

Say you saw it in SOAP!

THE FIRST, AND STILL THE FIRST

Niagara

CAUSTIC POTASH

Niagara Alkali Company was the first, in this country, to manufacture Caustic Potash. Our many years of development, experience and increasingly expert control have produced a grade of potash which is the finest obtainable here or abroad.

Caustic Potash is difficult to produce in a pure state. For a safe, consistently excellent quality, specify *Niagara.*

NIAGARA ALKALI COMPANY

Associated with Electro Bleaching Gas Co.
Pioneer Manufacturer of Liquid Chlorine

9 East 41st Street, New York, N. Y.

Say you saw it in SOAP!

"The APPEARANCE of our Soap is GREATLY IMPROVED by pressing without Salt Water"

says the maker of one of the world's finest toilet soaps.

He is able to press soap without salt water since he installed the press illustrated, which by the peculiar operation of its toggle pressure increases the cohesion of the soap stock and prevents its adhering to the dies.

• • •

Give your soap the best possible sales appeal, which largely hinges upon its "eye appeal."

Beautifully pressed soap sells better.

Aid your sales thru better pressing on the new Jones toggle operated press.

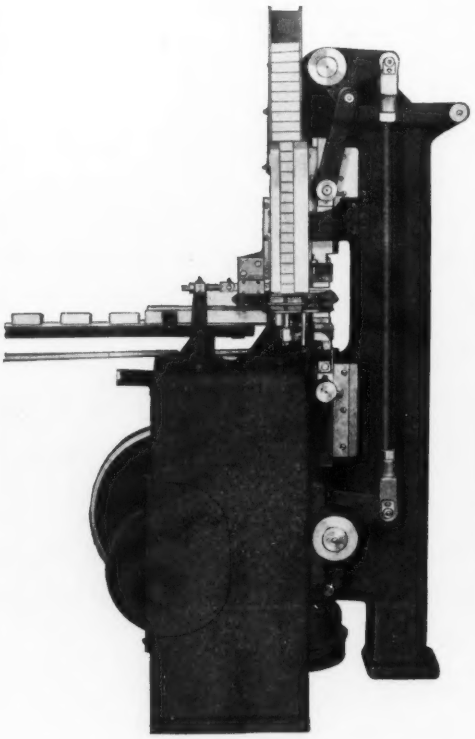
•

There are many other vital points of superiority in the new toggle operated JONES presses of various types.

We also make presses for all sizes and varieties of laundry and toilet soap including Pin Die Shapes.

Write for details.

•



TYPE ET

R. A. JONES & COMPANY, INC.

P. O. BOX 485 CINCINNATI, OHIO

Builders of the CONSTANT MOTION CARTONER, the standard cartoning machine of the world.

Say you saw it in SOAP!

SOAP

VOLUME EIGHT NUMBER NINE

Soap Prices

SOAP prices take on a somewhat different aspect as the raw material situation shows a turn-about and develops an upward price trend. It is apparent that soapers cannot continue to reduce soap prices. Even though their storage tanks are filled to overflowing with cheap oils and fats, they are faced with the inevitable replacement market. Of course, there will be those who will keep their prices at the minimum as long as they possibly can. Price advances will be opposed by consumers, and consequently the last manufacturers to move up will naturally receive the call from price buyers. Much will probably be made of price advances by competitors. Nevertheless, the soap industry has permitted itself the ease and luxury of following its raw material costs down to one of the lowest levels in history. It is going to have to fight its way back before the prick of higher material costs, and the fight is not going to be an easy one.

Those soapers who profited most on the decline — the hand-to-mouth buyers who secured the advantage of every fractional price decline in fats — are likely to be the ones to pay the most on an advance. They are, of course, mostly the smaller soap makers. Those of them who have foreseen what a reversal of the market might have in store, are probably preparing to change their buying methods where financial position will permit. Others may find themselves in a rather unpleasant competitive situation. With fat prices a cent or two higher, the present position of soap prices becomes untenable. The industry has been basing its prices on raw material figures which have been below actual cost of production for two years. It looks like a day of reckoning is close at hand.

—o—

The Five-Pound Package

THE soap industry continues to careen along at a dizzy pace in its new merchandising activities. Where the road will end, we cannot tell. We do predict, however, that if the follow-the- leader method of jumping into every crack-brained scheme that pokes its head over the horizon continues, some units of the soap industry are due for a bad beating.

When the five-pound package of soap flakes was first offered, we had the idea that it might be a good thing in some ways — that it might stimulate sales and give the manufacturer a chance perhaps to widen his profit margin — that it was infinitely better than the sale of bulk flakes by the pound from an open barrel. Little did we think that some manufacturers would vie with each other in trying

to give their five-pound packages away. We saw it as a possible means of profit — not loss.

To sell five pounds of soap flakes, well packaged, for twenty-five cents or less retail means that the manufacturer is supplying the goods at a ridiculously low price — a price which must show a loss on every shipment. To attempt to justify it as a means of popularizing brands, as an advertising stunt, does not ring true. The fact is that somebody started it, and others have followed suit because they thought that they might lose business if they did not. May be they would have been better off to have lost the business. Is the industry going to follow every lead where a manufacturer starts out apparently intent upon slitting his own throat?

Now is the psychological moment to stiffen prices, not to reduce them further. Raw materials are much firmer, sentiment is better, and conditions generally show signs of improvement. It is the time to start easing the no-profit emergency lines into the discard, and of returning the standard articles to a decent profit-margin basis. If the five-pound package of flakes is to be continued, it should be sold — not given away.

—o—

Soap in the Political Arena

IN the papers, we see that the Young Democratic Clubs of America are going to sell soap and use the money thus earned to elect Mr. Roosevelt. "Democratic Soap — Let's Clean Up America" is reputed to be the slogan on the wrapper. The bar will sell for ten cents, four of that amount going into the campaign fund. Locally manufactured soap will be used wherever possible.

Having seen samples of other various and sundry so-called advertising soaps from time to time, we can imagine what the new soap might be like. Bearing this in mind, we feel that the Soap Committee of the Young Democrats should add a word or two on the label. We suggest: "For advertising purposes only. Not to be used on the human body. Free alkali guaranteed not to exceed five per cent."

With some of the finest toilet soaps which have ever come on the American market available today at ten cents per bar and less, we fear that there may be some difficulties in marketing any great quantity of the new Democratic Soap at ten cents, even though it may be wrapped in red, white and blue. Patriotism, political fervor, and a clean neck are but distantly related.

—o—

Advertising Indicted!

THE recent trend in consumer advertising copy comes in for further sharp criticism. A biting indictment of the widespread pseudo-scientific and paid testimonial advertising was handed up by H. A. Batten of N. W. Ayer & Sons, advertising agency, in a recent issue of "Atlantic Monthly" and was reprinted in August "Printers' Ink Monthly." The rubbish and rot which has found its way into the copy of many national advertisers is arousing disgust everywhere. That the public is aware of the general lack of honesty and sincerity is evidenced by the mushroom growth of publications burlesquing and ridiculing such advertising.

Manufacturers of cigarettes have been followed by makers of tooth paste, mouth washes, hair tonics, and even gasoline, in an advertising olympiad apparently to determine who can be the most ridiculous. Soap and shaving cream manufacturers are no exception. They are playing their part in this comedy of advertising nonsense. May be it is selling more of certain brands, but it is most certainly not increasing their prestige or the esteem of thinking people for them or their makers. Most assuredly, it is beneath the dignity of most of the firms who are playing a part.

Probably not one statement in twenty in this newer type of advertising has any genuine basis in scientific fact. Pseudo-science to fit the occasion, to scare or bewilder the ignorant — the full truth left untold — vague implications — subterfuge — in all, a sorry mess! Isn't it about time that national advertisers called a halt?

—o—

The recent general rise in commodity prices is undoubtedly the best thing which has happened for business in two years or more. It may be the stimulus which industry has needed. Among soapers, there is no doubt but that higher raw material prices will be welcomed as a means of stiffening the backbone of the entire industry.

Primitive soap making was brought from Europe by the earliest American colonists, —crude soap from kitchen fat drippings and leached wood ashes.

American Soap Manufacture

A Brief History

By Roscoe C. Edlund
and Ida M. Lynn*

THE soap industry in the United States produces each year over three billion pounds of soap. The industry supplies the needs of American homes and institutions for a staple of everyday use. While exports are a relatively small percentage of the production, American soap and cleansers nevertheless find their way to practically very country on the face of the globe. The soap produced yearly is sufficient to supply 27 pounds per capita to the men, women, and children of the United States. The value of soap production is close to $300,000,000, with another $50,000,000 for cleansers and polishing preparations. For many reasons, which include the general American acceptance of soap as a necessity, soap manufacture ranks as one of the more stable American industries. The industry is proud of the low unit cost to which it has brought its products, and of its record of stable and well planned employment.

In history, soap manufacturing in the United States goes back to the earliest colonists, who brought with them from their former homes a knowledge of the principles of soap making. They knew that by treating fat with an alkali a product could be obtained which even in these early days had become almost indispensable to their comfort and welfare. In the scattered communities of colonial days each farm was practically self-sustaining, and raw materials were at hand to supply most of their needs. For soap, there were wood ashes from fireplace and stove, which every thrifty household stored carefully away, and fat drippings from the kitchen, supplemented by tallow, saved by the farmer from the occasional slaughtering of animals for food supply. "In early days tallow was a farm product in the way that butter is today. Farmers did their own butchering and preserving at certain seasons of the year, and it was only in localities adjacent to large centers that the animal carcass was sold and the separation from trimmings and scraps was made by the town butcher. The purchase of cattle on hoof by local butchers and slaughtering was a general industry until the growth of large centers of population and the rapid absorption for agricultural purposes of land devoted to grazing."[1]

The labor required to make the soap was considered by the housewife one of the regular duties of the house-

* Genl. Manager and Asst. Research Librarian respectively of Assn. of American Soap and Glycerine Producers, Inc.

[1] Lamborn, p. 4.

Preparing the alkali for the soap kettle from soda and lime before modern alkali manufacture in the United States gave the soaper finished caustic soda at moderate prices.

hold economy. To the fats she added lye, which was usually run off from a wood-leaching apparatus, and boiled them in an open kettle, preferably hung out-of-doors on a tripod, or a pole supported by two stumps, over a log fire. It was not a savory mixture, nor was the soft soap that resulted a dainty product, but with it the colonists contrived to keep themselves clean, and to keep alive the soap habit.

As the colonial communities became more closely knit, small soap factories began to be established. New England was the early stronghold of the soap business; the industry is reflected in old records, as follows:

In 1637 "Mr. Browne, a 'sopemaker' desired and was granted admittance to Salem in September, 1637."[2]

In 1664 "Stephen Haskett, a soap boiler arrived from Spain."[2]

"Soap constituted part of a Mass. lading to Va. in 1697 and 70 years later some 21,000 lbs. of this article are recorded in coastwise shipments."[3]

In 1731 "Rhode Island gave John Lucena (naturalized that year) sole right to manufacture castile soap in that colony. Lucena had learned the soap business in the factory of the king of Portugal."[4]

In 1768, "11,000 lbs. of soap were exported across the Atlantic to the Azores from the U. S.," and "3,548 boxes of soap were shipped to the West Indies (perhaps not entirely of U. S. manufacture)."[4]

In 1784, Robert Hewes conducted a slaughter house and a soap factory for hard and soft soap."[4]

"Soap was included in the U. S. protective legislation of 1789."[4]

AS the urban groups became less directly dependent upon the soil, house-to-house collection of fat remnants at first furnished the necessary raw materials for soap manufacture; tallow was a farm product. Soap and candles were inseparably associated at that time, and to make them the early soap and candle maker rendered his fats in open kettles,[6] which were small, made of cast iron, and fire-heated. This fact has an interesting significance in the history of soap making, for it appears that mottled soaps, once so popular, were accidental products of iron kettles. "If soaps become tinged with the iron of the boiler in which they are made, as they frequently do, and contain too little water to render them sufficiently fluid to deposit these stained portions, the soap is then mottled, and these mottled soaps were formerly favorites, because they were less mixed with water; but this is of much less value, for they are successfully imitated."[7]

[2] Belknap, p. 18, 68.

[3] Br. Mus. Additional MSS 15485. (As cited in Clark.)

[4] Clark, p. 50, 97, 99, 482, 271.

[6] Lamborn, p. 1.

[7] Industrial America, p. 529.

THE PENNSYLVANIA GAZETTE

From June 12 to June 19, 1735

Numb. 341

SUPER FINE CROWN SOAP

It cleanses fine Linens, Muslins, Laces Chinces, Cambricks &c. with Ease and Expedition, which often suffer more from the long and hard Rubbing of the Washer, through the ill Qualities of the SOAP they use, than the Wearing. It is excellent for the Washing of Scarlets, or any other bright and curious Colours, that are apt to change by the Use of common SOAP. The Sweetness of the Flavor and the fine Lather it immediately produces, renders it pleasant for the Use of Barbers. It is cut in exact and equal Cakes neatly put up, and sold at the NEW PRINTING OFFICE, at 1 s. per Cake.

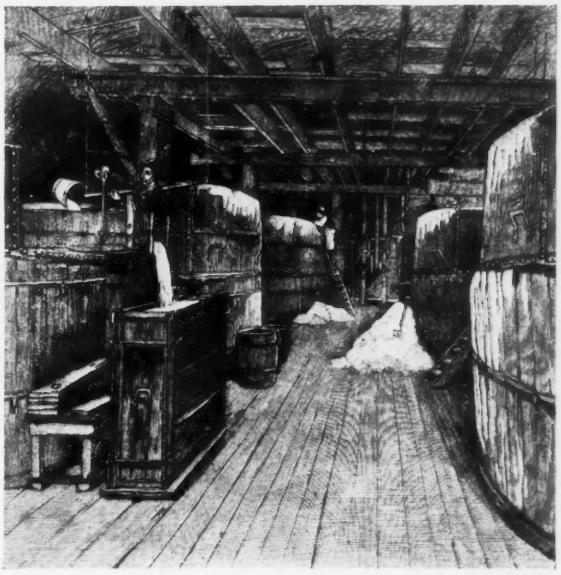
Other early apparatus included the bucket and dipper, the hand-crutcher, and sectional, detachable wooden frames. The soap was ladled by hand from the kettles into the frames, or into buckets or tubs from which it was poured into the frames. A wooden curb was fastened to the kettles by means of wedges and cement; "the composition of a cement that would prevent leakage for any length of time was then considered a great trade secret."[8] Grocers were supplied with large blocks of soap from which it was cut for the customer in desired amounts, usually in pound cakes.

Soap makers very soon recognized the value of advertising. In the *Pennsylvania Gazette* for June 12 to June 19, 1735, printed in Philadelphia "by B. Franklin, at the New-Printing-Office near the market," is the advertisement reproduced here.

In 1756 Elizabeth Franklin, widow of Benjamin's brother John, advertising in the Boston *Evening Post,* made the following complaint: "Sundry persons endeavoring to impose on them a sort of soap which they call Crown Soap, a little resembling it in appearance, but vastly unlike in quality, by which the character of the soap has suffered greatly with people who have not taken particular notice, the Papers being so near the same as easily to decieve (sic) and that there never was in New England any person but the late Mr. John Franklin that made the true sort of Crown Soap. It is now being carried on by Mrs. Elizabeth Franklin at the Post Office, Boston, where they may depend upon being supplied with that which is good; and Hard Soap, Wax and Tallow Candles by wholesale and retail for Families or shipping."[9]

About a century later, Henry Ward Beecher is said to have published in his newspaper a strongly worded commendation of "sapolio," a product invented and introduced by the old firm of Enoch Morgan's Sons.[10]

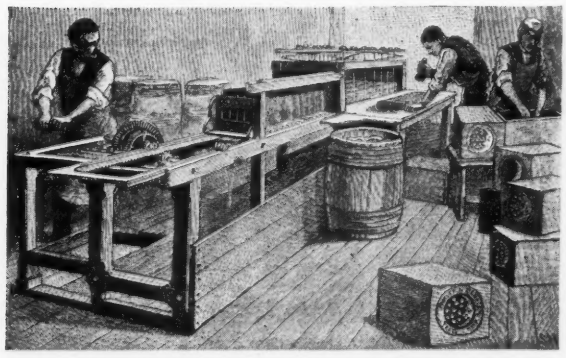
Horace Greeley is credited with having been so confident of the value of advertising, that he offered James Pyle, the first manufacturer of soap powder in the United States, advertising space in the *Tribune* for one year, to be paid for at the end of that time only on condition that Pyle was convinced that it had been profitable.[11]



Soap was manufactured in wooden vats prior to the advent of the steel kettle. Ladeling finished soap from vat to frame by hand.

A. S. Bolles declared in 1879 that "one secret of success in trade is first to have a good thing to sell and then to let the whole world know it. . . ." But by that time, soap makers were not limiting themselves to newspaper advertising, for Bolles went on to say: "They had sent out an army of men with brushes and pots of colored paints, who have covered all the available board fences and barns and conspicuous rocks with huge inscriptions and signs proclaiming the names and virtues of their soaps."[12]

BEFORE the art of advertising had reached this stage of development, and while a large percentage of American soap was still the product of home industry, investigations were being made in France which were to bring results of inestimable value to the soap industry. Authorities agree in giving two men credit for having been the means of revolutionizing the processes of soap making: Nicolas LeBlanc, physician to the Duke of Orleans, who, in the latter part of the 18th century devised a satisfactory method of making soda from common salt by the addition of chalk or limestone, and Michael Eugene Chevreul, who gave to science the first actual knowledge of the chemical nature of fats and oils. LeBlanc's discovery made possible a good supply of free alkali, upon which the soap industry depends, and



Cutting, stamping, and boxing "White Soap" by hand at the Procter & Gamble factory in Cincinnati fifty years ago. From the Scientific American, Feb., 1882.

[8] Gathman, p. 20.
[9] Dexter, p. 52.
[10] The Great Industries of the United States, p. 682.
[11] Lamborn, p. 6.
[12] Bolles, p. 529.

(*Turn to Page* 57)

OIL LAVENDER FLOWERS
OIL YLANG YLANG
OIL VETIVERT BOURBON

WE offer you these oils *direct* from the source of origin.

OIL LAVENDER FLOWERS is obtained from *our production unit* in PUBERCLAIRE.

OIL VETIVERT BOURBON from *our production unit* in SAINT-DENIS, Reunion Islands.

OIL YLANG YLANG from *our production unit* in the COMORO ISLANDS.

The fact that we are *producers* of these oils, places us in a *unique* position when we are called upon to guarantee their *purity*.

Outstanding *Since* 1768

ANTOINE CHIRIS COMPANY
147 - 153 Waverly Place, New York

Production Units

Main Factory: GRASSE, FRANCE

L'ABADIE, France	VIGONE, Italy	BAMBAO, Comoro Is.
LE VIGNAL, France	AVOLA, Italy	SURABAYA, E. I.
PUBERCLAIRE, France	BOUFARIK, Algeria	LANGSON, Tonkin
BARREME, France	SOUSSE, Tunis	CHUNG-KING, China
LA ROQUE-ESCLAPON	ANTALAHA, Madagascar	TATSIENLU, China
RAHMANLARE, Bulgaria	SAINT-DENIS, Bourbon Is.	CAYENNE, Fr. Guiana
LES HESPERIDEES, Reggio, Italy		MESSINA, Sicily

SOAP BUILDERS

Detergency of Alkaline Salt Solutions as Determined by the Measurement of Lowered Interfacial Tension

By Dr. Foster D. Snell

INTERFACIAL tensions were determined by falling drops of water in oil and by rising drops of oil in water. The latter are lower. The oil is a mixture of mineral and saponifiable oil containing accurately controlled amounts of free fatty acid from 0.16 to 2.12 per cent, or it is benzene containing 0.1 per cent free fatty acid.

The technic in which benzene containing 0.1 per cent free fatty acid rises through the detergent solution is recommended.

The "neutral" point of soap at pH 10.2 should govern prediction of its behavior with alkaline salts. It is suggested that alkalinity available above pH 8.0 and above 10.2, expressed as sodium oxide, is a better method of comparative commercial expression of one function of builders than is total sodium oxide.

There is a general parallelism between the interfacial tensions obtained and the pH of the alkaline salt solution, although that is not the only factor. Data show that a relatively highly alkaline soap builder such as metasilicate can partially replace soap, so far as interfacial tension measurements are concerned.

The effect of the alkaline builder is interpreted as manifesting itself in three ways in the order of decreasing importance: by reaction with fatty acid in the dirt to form soap, by repression of the hydrolysis of soap by the hydroxyl ion to form micellar soap, and to a much lesser extent by repression of the ionization of soap by the sodium ion to form micellar soap.

Of themselves alkaline salts do not possess the detergent property of lowering the interfacial tension of water against pure benzene. When added to soap solutions they do lower the interfacial tension against pure benzene. With or without added soap they lower the interfacial tension against a nonaqueous mixture containing free fatty acid. In the presence of soap, neutral salts also lower slightly the interfacial tension against either pure benzene or a nonaqueous medium containing free fatty acid.

Of the materials studied, sodium hydroxide causes the greatest lowering of interfacial tension when added to soap. Sodium orthosilicate is next, followed by sodium metasilicate.

This is the second of a series of reports by Dr. Snell on studies of the detergency of various alkaline salts commonly used as soap builders. It is republished from the September issue of INDUSTRIAL & ENGINEERING CHEMISTRY by permission of the editor and the author. The first report of this series appeared in the January, 1932, issue of that publication and was also republished in the January issue of SOAP.—The Editors.

THE tension existing at the interface between two solutions may be expressed semi-quantitatively by the number of drops formed when a given volume of one solution is discharged into the other at a given rate. The number of drops increases with decreasing interfacial tension but is not a linear function. For more exact comparison the drop numbers must be calculated to an expression of the interfacial tension in dynes per centimeter.

Such a method has been employed for determination of the wetting power of a series of solutions of alkaline salts, commonly used for addition to soap for detergent purposes, against various water-insoluble liquids. The degree of alkalinity of these salt solutions has been previously determined (*12*) as shown both by the initial pH and C_{OH} of the solution and by the total available alkali present. Sodium chloride was used for comparison as a neutral sodium salt. Interfacial tension determinations are one method of indicating the detergent value of such salt solutions and the relationship existing between the degree of alkalinity and the wetting power when used with soap.

This type of method was used by Donnan (*2*) to measure the interfacial tensions of solutions of different concentrations of sodium hydroxide against a commercial rapeseed oil. He counted the drops of oil discharged from a pipet into the sodium hydroxide solution. Hillyer (*6*) obtained drop numbers in this way for a series of materials (including saponin, sodium oleate, and sodium hydroxide) against kerosene or pure cottonseed oil. He also studied oleate, palmitate, and stearate soaps at different concentrations. Harkins and Zollman (*5*) studied the effect of added acids, bases, and salts on the interfacial tension of sodium oleate solution by measurement against benzene.

Elledge and Isherwood (*3*) used the same method for measuring the effect of soap with added builder on the interfacial tension of the solutions against benzene.

Millard (*8*) also used benzene as the nonaqueous solution into which a known volume of aqueous solution was discharged. His apparatus consisted of a pipet controlled by displacement of air from a vessel into which mercury was allowed to drop slowly. The pipet and flask of benzene into which it dipped were surrounded by a water bath maintained at 40° C. His measurements were on the effect of addition of various alkaline materials to a 0.03 per cent soap solution. Of the series he studied, sodium hydroxide added to soap solution gave the lowest interfacial tension, with sodium carbonate

next. Two silicates were included in his series, the more alkaline one having an alkali ratio of $2Na_2O:3SiO_2$. Drop numbers for sodium silicate were also determined by Richardson (*9*). He used a silicate having the composition $Na_2O:2.83SiO_2$ and found the interfacial tension of a solution containing 0.05 per cent of this salt and 0.10 per cent soap to be greater than that of a similar solution containing sodium carbonate.

Shorter (*10*) studied the rise of nonaqueous droplets through soap solutions in which he varied the ratio of fatty acid to alkali from 0.95:1.0 to 1.43:1.0. In general, his results were higher, the greater the amount of alkali present, whether his nonaqueous liquid was benzene or benzene containing 5 per cent free oleic acid. In the case of benzene he measured the effect of soap, hydrolyzed and unhydrolyzed. When working with benzene containing free fatty acid, he had, in addition, soap formed at the interface, although the excess alkali was insufficient to form much soap, relative to the amount already present and to the amount of fatty acid available. Shorter and Ellingsworth (*11*) presented similar data and concluded that "the effect of a given addition of alkali is the greater the smaller the constant concentration of the soap." They suggested that this is due to an increase in the colloidal nature of the soap solution.

It will be helpful in visualizing the results in which soap is used if the pH value of a "neutral" soap is recalled. This is approximately 10.2 for a 0.1 per cent solution, varies but slightly over a considerable range of concentration, and may be spoken of as the neutral point for soap. Addition of a more alkaline buffer salt renders such a solution more alkaline. Addition of any buffer salt which gives solutions having a lower pH renders the soap solution more acid. This is the case with sodium silicates of a ratio 1:3.86, or greater, modified soda and borax. Therefore, soap solutions can be considered as acidified by borax and rendered alkaline by soda ash.

Experimental Methods

For these determinations a method similar to Millard's was first adopted.

The Traube stalagmometer used consisted of a capillary tube sealed into a pipet. The capillary was flattened out at the end in order to provide a larger dropping area. The radius of the tip was 4 mm., and the volume of the pipet was 6.02 cc. at 20° C. The time required to empty the pipet was approximately 6 minutes. The stem of the pipet was graduated above and below the bulb. The stalagmometer dipped into a glass dish containing the oil against which the determination was being made. The dish was fitted with a three-hole stopper through which the stalagmometer, a thermometer, and a glass tube to provide for displacement of air were inserted. The whole was surrounded by a glass water bath maintained at 40° ± 0.5° C.

Since benzene was used as the nonaqueous liquid in the majority of previous experiments, one series of determinations was carried out against that substance. These measurements illustrate the detergent effect on an unreactive and inert substance. Such determinations, however, are not representative of actual washing conditions since, in general, the oil or grease present in dirt contains a small amount of acid, and this is quite generally believed to be of the nature of fatty acid. Therefore, a factor is present in actual washing which is not represented by interfacial tension determinations against benzene—the reaction between the alkaline salt and fatty acid to form soap. A further difference is the presence of saponifiable oils as well as unsaponifiable oils in dirt. In order to approximate more closely actual conditions, a series of oils was made up composed of equal volumes of a light refined mineral oil and a food-grade cottonseed oil to which varying amounts of oleic acid were added. The cottonseed oil originally contained 0.545 per cent free fatty acid calculated as oleic. The oleic acid added was a commercial grade which showed 92.54 per cent free oleic acid on analysis. The free fatty acid present in the different mixtures is shown in Table I. After standing for some time, the free fatty acid content of the oil mixtures changed slightly so that they could not be used to give results which would be strictly comparable with determinations made some weeks earlier.

TABLE I. FREE FATTY ACID CONTENT OF OIL MIXTURES

OIL MIXTURE	SP. GR.	FREE FATTY ACID ADDED %	FREE FATTY ACID TOTAL PRESENT %
I	0.8754	1.85	2.12
II	0.8756	0.0	0.27
VI	0.8766	0.05	0.32
VII	0.8833	0.0	0.19
VIII	0.8831	0.0	0.16

In some cases streaming occurred. This means that, when one solution was discharged into the other, the interfacial tension was so low that drops were too close together to count or that actual drops were not formed. In this case, the interfacial tension was assumed to be less than one dyne per centimeter. This is in accordance with the results of Harkins and Zollman (*5*) who found that with interfacial tensions of less than one dyne per centimeter emulsification takes place so readily that two layers cannot be separated.

In later experiments a mixture of benzene with oleic acid made up to contain 0.1 per cent free fatty acid was adopted in place of the various oil mixtures. While this did not approximate as closely the actual composition of the oils in dirt, it had the advantage of being easily duplicable and of having less tendency to change over a period of time. The benzene oleic acid mixture was suitable for comparison of the materials under consideration, as the free fatty acid content was sufficient to bring out the differences between them and yet was small enough so that the minimum amount of streaming occurred.

The interfacial tensions, expressed in dynes per centimeter, as determined against the series of oil mixtures and against benzene with the Traube stalagmometer are shown in Table II.

TABLE II. INTERFACIAL TENSIONS OF 0.033 PER CENT SOLUTIONS OF ALKALINE SALTS

pH*a*	SALT	INTERFACIAL TENSIONS*b* AGAINST: Benzene	Oil I	Oil II	Oil VI
		Dynes per centimeter			
	WITHOUT SODIUM OLEATE				
11.85	Sodium hydroxide	30.6	<1.0	6.9	<1.0
11.2	Sodium metasilicate	32.5	<1.0	13.4	9.9
10.8	Trisodium phosphate	30.6	2.8	15.2	12.3
10.7	Sodium silicate 1:1.58	30.6	<1.0	15.2	12.3
10.65	Sodium carbonate	30.6	<1.0	12.6	9.3
10.1	Sodium silicate, 1:3.86	32.5	1.0	18.9	18.0
10.0	Modified soda	32.5	3.8	16.8	14.1
9.35	Borax	32.5	11.3	19.7	19.0
7.2	Sodium chloride	32.5	19.0	21.6	20.4
10.2	Sodium oleate	16.4	5.7	8.8	7.9
5.6	Water	30.6	21.2	22.6	22.4
	WITH 0.1 PER CENT SODIUM OLEATE				
11.9	Sodium hydroxide	5.4	..	<1.0	<1.0
11.3	Sodium metasilicate	11.5	..	4.1	<1.0
11.1	Trisodium phosphate	12.0	..	5.4	4.2
11.0	Sodium silicate, 1:1.58	12.0	..	4.8	4.2
11.0	Sodium carbonate	11.7	..	4.4	3.0
10.4	Sodium silicate, 1:3.86	16.8	..	9.0	8.1
10.3	Modified soda	15.5	..	7.5	6.3
10.2	Sodium chloride	16.1	..	8.9	6.0
9.8	Borax	20.9	..	12.7	11.1

a At 25° C. *b* At 40° C.

In these determinations the fatty acid present in the test was always in excess of the alkaline salt, since the aqueous solution was being liberated under the surface of the oil, and the amount of alkaline salt solution was relatively much less than the amount of oil present. This by no means indicates that excess fatty acid would be present in the interface. It does mean that a somewhat greater amount of alkali would be present in the interface than would be the case if the oil were in large excess because of the large reserve supply available to diffuse into the interface and thus prevent local exhaustion of alkali by reaction. Under actual conditions the oil or dirt is dispersed in the aqueous detergent solution, and the alkaline salt should be in excess of any acidity in the dirt to be removed. An apparatus in which drops of oil rise through the solution of detergent would therefore offer a comparison under conditions more closely approximating those occurring in actual use. Then, instead of drops of detergent solution formed and dropping through a large excess of oil, drops of oil representing dirt would be formed and would rise in a large excess of detergent solution.

To obtain a comparison of this sort, a Dimmig pipet was employed. This apparatus is a modification of the pipet used by Donnan (*2*) and was developed by the American Society for Testing Materials (*1*) for measuring the emulsifying tendency of lubricating oils.

The capillary tip is 1 mm. in diameter and used in such a way that the drop forms only on the inner edge of the tip. The pipet has a volume of 2 cc. and is graduated to 0.01 cc. The rate of formation of drops is regulated by the rate of flow of a heavy oil contained in an upper compartment and controlled by a stop-cock. A rate of two drops per minute was selected. The tip of the pipet is curved so that the drops of oil are delivered near the bottom of the aqueous solution and rise through it. This apparatus was dipped into a dish containing 50 cc. of the detergent solution and the whole was maintained at a temperature of 40° ± 0.5° C. by a water bath.

The results of the determinations with this apparatus are shown in Table III.

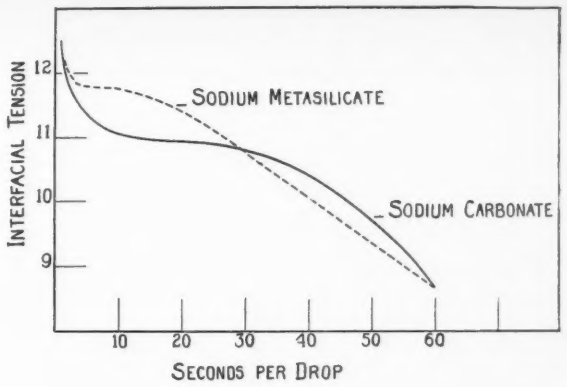


TABLE III. INTERFACIAL TENSIONS OF 0.033 PER CENT SOLUTIONS OF ALKALINE SALTS

pH*a*	SALT	INTERFACIAL TENSIONS*b* AGAINST: Benzene	Oil I	Oil II	Oil VI	Oil VII	Oil VIII
		Dynes per centimeter					
	WITHOUT SODIUM OLEATE						
11.85	Sodium hydroxide	29.89	<1.0	<1.0	<1.0	<1.0	<1.0
11.2	Sodium metasilicate	29.89	<1.0	3.20	2.15	6.41	6.71
10.8	Trisodium phosphate	29.89	4.18	5.59	5.30	8.45	8.98
10.7	Sodium silicate, 1:1.58	29.89	<1.0	3.62	2.77	6.65	7.26
10.65	Sodium carbonate	29.89	<1.0	2.32	1.13	5.21	5.44
10.1	Sodium silicate, 1:3.86	29.89	6.83	9.09	8.79	11.40	11.58
10.0	Modified soda	28.86	3.40	6.49	5.46	7.72	7.72
9.35	Borax	29.89	7.61	11.54	10.76	12.18	13.30
7.2	Sodium chloride	29.89	16.99	15.80	17.16	17.52	17.96
10.2	Sodium oleate	13.49		5.23	6.38	6.36	6.00
5.6	Water	31.06	24.87	19.65	19.48	24.44	24.44
	WITH 0.1 PER CENT SODIUM OLEATE						
11.9	Sodium hydroxide	4.71	..	<1.0	<1.0	<1.0	<1.0
11.3	Sodium metasilicate	9.51	..	<1.0	<1.0	1.80	1.96
11.1	Trisodium phosphate	10.75	..	1.90	1.39	3.01	2.87
11.0	Sodium silicate, 1:1.58	10.46	..	1.51	<1.0	2.27	2.75
11.0	Sodium carbonate	9.72	..	<1.0	<1.0	1.87	2.18
10.4	Sodium silicate, 1:3.86	13.51	..	4.69	3.94	5.17	5.84
10.3	Modified soda	12.31	..	2.79	2.26	4.06	4.20
10.2	Sodium chloride	12.31	..	3.32	3.15	3.54	4.01
9.8	Borax	17.81	..	7.50	6.55	7.48	7.81

a At 25°C. *b* At 40°C.

Drop numbers were calculated to expression in dynes per centimeter, according to the law of Tate, which is expressed by the equation:

$$\gamma = \frac{mg}{2\pi r}$$

where γ = interfacial tension
m = mass of drop
g = acceleration of gravity
r = radius of tip, cm.

The mass of the drop was calculated from the drop number by dividing the volume of the pipet by the drop number and multiplying by the difference in density between the aqueous solution and the oil. The specific gravity of the dilute aqueous solutions was assumed to be the same as that of water. The specific gravities of the different oil mixtures are included in Table I.

In the determinations with the Traube stalagmometer, correction was made for the shape of the drop, using the formula of Harkins and Brown (*4*). They express the function of the ratio of the tip radius to the cube root

of the drop volume by $\psi(r/v^{1/3})$, and the Tate formula is modified by them to:

$$\gamma = \frac{mg}{2\pi r\psi\left(\frac{r}{V^{1/3}}\right)}$$

Values for $\psi\ (r/V^{1/3})$ corresponding to calculated values for $r/V^{1/3}$ are read directly from a table prepared by them. In the case of the Dimmig pipet the radius of the tip is 0.5 mm., which is so small that the values for $r/V^{1/3}$ did not appear on the Harkins and Brown table. The drops were assumed to approach the shape of the ideal drop, and no correction was applied to the formula.

Comparison of Methods

THE values obtained with the Traube pipet are, in general, higher than those obtained with the Dimmig pipet. The results could not be expected to agree since the conditions of equilibrium are so widely different. The results of such interfacial tension measurements depend largely on the extent to which equilibrium is reached in the interface.

The orifice of the Dimmig pipet is smaller than that of the Traube pipet. The rate of discharge from the Dimmig pipet was two drops per minute. The rate from the Traube pipet was directly proportional to the number of drops, since with this pipet the time of discharge was constant as is customary in the use of this apparatus. With the Traube stalagmometer the period of exposure of the drop decreases as the drop number increases. Thus the average area exposed varies as an inverse function of the drop number, and the extent to which equilibrium is attained would be lessened with the more efficient builders. The drop numbers with the Dimmig pipet are larger and the time for determination is longer so that it may safely be assumed that equilibrium is more closely approached with that apparatus. With that pipet the time of formation of each drop is constant. The area exposed is therefore varying, increasing with decrease of interfacial tension. This tends to accentuate the differences between the different aqueous solutions. When the drop of oil enlarges rapidly on the pipet and rises quickly from it, there is less opportunity for fatty acid to diffuse through the stagnant film at the interface of the non-aqueous medium and for hydroxyl ion to diffuse through the similar film of water to meet and form soap in the interface.

Another difference between results with the two pipets is that in one case a much larger reserve supply of fatty acid than of alkaline salt is available, whereas in the other the reserve supply of alkaline salt is in excess when reaction takes place between the two. This factor is not present in the results against benzene, and in that case the values with the two pipets are in close agreement.

In Table IV are given the deviations of results obtained with the Dimmig stalagmometer using two different solutions, when the rate of discharge is varied from one to sixty drops per minute. The variable size of the drop during formation makes consideration of this factor extremely complex. The data show that under no conditions studied is equilibrium attained, nor do they indicate that equilibrium can be attained.

TABLE IV. INTERFACIAL TENSIONS COMPARING RATE OF DISCHARGE OF 0.1 PER CENT SOLUTIONS AGAINST BENZENE CONTAINING 0.1 PER CENT FREE FATTY ACID

DROPS PER MINUTE	TIME PER DROP	SODIUM CARBONATE, γ	SODIUM METASILICATE, γ
	Seconds	*Dynes per centimeter*	
1	60	8.67	8.63
2	30	10.80	10.80
4	15	11.01	11.62
10	6	11.18	11.79
20	3	11.62	11.83
40	1.5	11.87	12.13
60	1	12.49	12.22

In the vicinity of two drops per minute, or 30 seconds per drop, plotting of these data shows that the curve descends at a rate of approximately 0.05 dyne per centimeter per second. This indicates that the value of 10.80 γ would be 10.85γ if run at 29 seconds per drop, or 10.75γ if at 31 seconds per drop. The curve is therefore descending sufficiently slowly so that duplication of determinations within 0.5 per cent is to be expected and was obtained.

The results do not indicate an equilibrium condition, nor one duplicable other than by apparatus of approximately the same size orifice discharging at the same rate. The results of the Dimmig determinations are probably more accurate than those with the Traube pipet and a truer designation of the interfacial tensions existing in commercial use of the salt solutions as builders.

Ratio of Builder and Soap

USAGE as to the proportion of builder to soap varies in different laundries. A ratio of 1:3 was adopted for this study as that most commonly used. In some cases, particularly with the more highly alkaline builders, a larger proportion of the alkaline salt is used. Equal parts of soap and builder have been recommended. Determinations of the interfacial tension against benzene plus 0.1 per cent free fatty acid, using solutions containing 0.05 per cent soap and 0.05 per cent builder, were therefore made with a restricted number of the salts. The results are shown in Table V in comparison with results using 0.1 per cent soap and 0.033 per cent builder. The use of the higher concentration is shown to be justified with a highly alkaline salt such as sodium metasilicate. The lower concentration of builder is more advantageous, however, with a salt such as modified soda which at 25° C. is weakly alkaline to the ordinary neutral point, pH 7.0, and weakly acid to the neutral point of soap, pH 10.2.

TABLE V. COMPARATIVE INTERFACIAL TENSIONS OF DIFFERENT RATIOS OF SOAP AND BUILDER AGAINST BENZENE AND 0.1 PER CENT FREE FATTY ACID[a]

SALT	0.033% BUILDER ALONE, γ	0.1% SOAP, 0.033% BUILDER, γ	0.05% SOAP, 0.05% BUILDER, γ
	Dynes per centimeter		
Sodium hydroxide	<1.0	<1.0	<1.0
Sodium metasilicate	10.80	6.54	5.26
Trisodium phosphate	12.95	8.45	8.21
Sodium carbonate	10.80	6.75	6.02
Modified soda	14.95	10.87	11.31
Sodium chloride	28.86	9.73	14.68

a With Dimmig Stalagmometer.

ACTION OF BUILDER IN LOWERING INTERFACIAL TENSION. The interfacial tensions obtained for the builder solutions alone against benzene show that these materials have substantially no effect when the oil or dirt is neutral. Differences, which may be noted, of 30.6γ to 32.5γ are only of one drop. At this interfacial tension the drops are large, and a variation of one drop makes a relatively large difference. Such is not the case with smaller drops. Sodium oleate solution reduces the value markedly. It is therefore evident that the alkaline salts studied, of themselves possess the detergent property of increasing wetting power against neutral oils only to a negligible extent. The values against benzene show substantially lower interfacial tension for mixtures of alkaline salts and soap than for soap alone, except when the salt lowers the pH value. The alkaline salts alone had no effect on the interfacial tension between benzene and water. It therefore follows that the additional lowering of interfacial tension when an alkaline salt is added to soap is due to some action of the alkaline salt on the soap. This may reasonably be ascribed to repression of hydrolysis of the soap, which would be expected to cause more soap to be present in this solution in the form of colloidal micelles than in a soap solution without added alkaline salt.

The values obtained against the nonaqueous media containing free fatty acid take into account another factor—the presence of free fatty acid in the oil. All the materials studied show lowering of the interfacial tension in the absence of soap when measured against any of the oil mixtures. This result is presumably due to reaction of the alkaline salt with fatty acid in the nonaqueous layer to form soap in the interface. The lowest values in general are those against Oil I which contains the largest amount of free fatty acid. Streaming occurred in a number of cases with this oil.

The lowest values of the series were obtained in the determinations of soap with added alkaline salt against the oil mixtures. This is to be expected, since in that case the interfacial tension of the soap solution is lowered both by repression of hydrolysis of the soap and by reaction of the alkaline salt with the free fatty acid of the oils to form additional soap. Oil I was not tested in that series because the data without soap indicated that nearly all would stream.

Alkalinity and Interfacial Tension

SINCE in both repression of hydrolysis and formation of soap by reaction with fatty acid one important factor is the degree of alkalinity of the added salt, the lowering of the interfacial tension of soap by added builder should also be related to the concentration of hydroxyl ion in a solution of the builder. For comparison in this way, the alkaline materials studied have been listed in Tables II and III in the order of their pH values as previously determined at 25° C. Although the absolute values of pH at 40° C. will differ, the relative values can be expected to be of the same order.

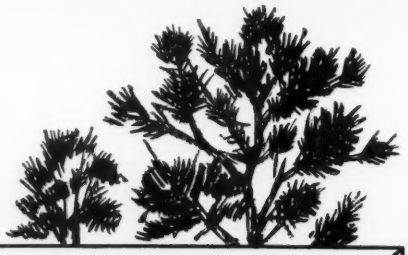
Results against benzene of solutions of the salts alone are negligible. In general, the salts having a higher pH in solution than sodium oleate cause lowering of the interfacial tension when added to soap solution. With the exception of modified soda and sodium chloride, the salts having a pH lower than that of sodium oleate cause an increase of the interfacial tension of soap solution. It is interesting to note that with modified soda and sodium chloride, which have similar equivalent weights, the result is apparently that of the sodium ion, since 0.033 per cent sodium chloride has the same effect as 0.033 per cent modified soda.

On the basis of pH values the effects on interfacial tensions of trisodium phosphate are, in general, less than would be expected, and those for sodium carbonate and modified soda greater. Here again the equivalent weights of the salts in solution as affecting sodium-ion concentration must be considered. The solutions were made up on a basis of percentage by weight. Trisodium phosphate, having a large equivalent weight, gives a low concentration in these solutions. The equivalent weight of sodium carbonate, and correspondingly of modified soda, is low in comparison with the other salts. The concentration of their solutions is therefore relatively high. Where repression of hydrolysis is the principal effect of the salts, the results are only slightly out of line with the pH determinations. This is also the case where both repression of hydrolysis and formation of soap enter in.

In all cases sodium hydroxide causes the greatest lowering of interfacial tension. Its inclusion in the data is for a two-fold purpose. As the first, it is the most alkaline builder possible and therefore represents one extreme, just as modified soda represents the other extreme of a salt used commercially for its neutralizing value which is not alkaline to soap. Sodium hydroxide deserves consideration in any such study because it has been and is being used as a builder. In laundry practice, fabrics encounter it in the bleach, even if not as a builder.

The second and more important reason is that it possesses some of the properties of a builder and lacks others, as will be shown in subsequent papers. Comparison of data at that time will therefore permit the use of these data on sodium hydroxide to indicate the relative importance of interfacial tension in the process of detergency. From laundry practice, it is to be concluded that a buffered salt is more satisfactory. This was confirmed by data subsequently. Similarly, sodium chloride was included as showing the effect of a non-

(*Turn to Page* 65)



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Say you saw it in SOAP!

The Distribution of Oil and Fat Consumption

(PART II)

By E. L. THOMAS

Specialist, Meats, Oils and Fats
Foodstuffs Division, Dept. of Commerce

U. S. CONSUMPTION OF OILS AND FATS

	1929	1931
Consumption for all purposes	**4,200,000,000**	**3,800,000,000 lbs.**
Consumption by soap makers*	**1,618,953,000**	**1,562,520,000 lbs.**
Percentage of total consumed by soap makers	**38.6%**	**41.0%**

* Including foots.

WE have now covered most of the more important vegetable oils, except corn oil, which, in 1929, was entirely of domestic origin (a little was imported from Europe last year). In point of tonnage involved, the reported consumption of corn oil in 1929 (56,755,000 pounds) was just a trifle larger than palm kernel oil. However, their positions were reversed in last year's statement for there was a shrinkage of nearly 14 million pounds, or 25 per cent in total reported consumption which reached a figure of 42,819,000 pounds in 1931. The biggest outlet in 1931 as shown by the statement was supplied by manufacturers of salad oils and dressings who are credited with 20,307,000 pounds, or about 48 per cent. Next in importance was the consumption in compounds and vegetable shortenings amounting to 6,616,000 pounds or practically 16 per cent of the total. Edible consumption, therefore, represented 64 per cent of all consumption returned, contrasting with 45 per cent (25,459,000 pounds) thus consumed according to the statement for 1929. That year, the soap industry took an equal percentage (25,602,000 pounds), but in 1931, only a little over 4 million pounds, or less than 10 per cent. To this figure should be added "foots" reported as consumed, in 1931, in the amount of 9 million pounds, or better than 20 per cent of all reported consumption, which would put the consumption by the soap industry at a relatively lower percentage than in 1929, due chiefly to lower prices for competitive oils, mostly soya bean. Recorded consumption by so-called "miscellaneous industries" in 1929 was 5,330,000 pounds or under 10 per cent. Last year, such consumption went down to 2,400,000 pounds, this figure being less than 6 per cent of the total. Other consumption may be ignored as unimportant in both years.

Sesame Oil Up 300% in 1931

WHILE all the major vegetable oils thus far mentioned reflected consumption decreases between 1929 and 1931, with the single exception of palm oil, sesame oil consumption expanded 337 per cent. This was attributable to several factors among which the Tariff Act of 1930, placing a duty on edible oils of foreign origin, undoubtedly was an influence favoring the much augmented tonnage of seed that came in during 1931 when imports were approximately 140 million pounds as compared with less than 56 million pounds the year before. Crushers on the Pacific Coast (80 per cent of the seed entered through West Coast ports last year) had a geographical advantage inasmuch as supplies were drawn almost exclusively from China. They supplemented limited supplies of cottonseed available locally to the crushers and from the states of Arizona, New Mexico and Lower California (Mexico). Cottonseed from our southern states and from Texas is under the handicap of high rail rates on movements to the West Coast.

In the sense that sesame oil has properties that lend themselves to much the same employment as cottonseed oil, i. e., as a salad oil and in the manufacture of vegetable cooking fats, it might be said to be competitive with cottonseed oil. However, this would hardly be true out on the West Coast. Furthermore, a short crop in China the past season (we grow no sesame seed except experimentally in this country) gives indication that there will be little seed from that source until after the

harvest of the 1932 crop is completed in the fall. For several years past, India, the only other country cultivating sesame seed extensively has had but little surplus for export.

It should be remarked at this point that of the 10,076,000 pounds reported as factory consumption in 1929, 4,836,000 pounds, or about half was claimed by the soap kettle, the balance going on the market as lard substitutes. In 1931, out of a total reported consumption of 44,778,000 pounds, which incidentally, was two million pounds more than the figure for corn oil, 75 per cent or thereabouts went into compounds and vegetable shortenings, and over 18 per cent (8,197,000 pounds) was reported as consumption by the soap industry plus 2,331,000 pounds, or 5 per cent appearing in the statement as "foots" making a total of 23 per cent that became a soap oil. This shift in percentages demonstrates clearly that manufacturers of edible products employed much more sesame oil in their products last year than was the case in 1929.

Soya Bean Oil Now Nearly All Domestic

IN the past three or four years, we have harvested domestic crops of soya beans that have each year surpassed in size that of the preceding year. We have thus become increasingly more independent of Manchurian soya beans and oil,—to such an extent, indeed, that last year 87 per cent of our full requirements in the oil were supplied by domestic soya beans and in 1931 again, we entered the export market for the first time partially due to a surplus, but also because of the low prices for soya beans here at home, which made possible, competition with Manchurian offerings in the markets of Europe. Contrast this situation with 1929 in which year 89 per cent of the oil we consumed came from Manchuria either as beans or oil. What does the census show us as to the consumption of soya bean oil in that year? In the aggregate, the reported quantity was 17,903,000 pounds, —less than 1½ per cent of the cottonseed oil figures.

Last year, reported consumption was 27,885,000 pounds, 56 per cent above 1929. The soap kettle accounted for 36 per cent (6.396,000 pounds) in 1929, and around 33 per cent (5,815,000 pounds) was consumed in the manufacture of paint and varnish, principally outdoor paints. By way of comparison, the former industry reported a consumption of but 3,816,000 pounds, less than 14 per cent last year, but to this should be added 1,625,000 pounds of foots or 6 per cent. Factory consumption in the paint and varnish industry last year was reported as 6.256,000 pounds, or 22 per cent. Of the balance, two million pounds in 1929, or something over 10 per cent was required by "miscellaneous industries." Linoleum or oilcloth manufacturers reported their consumption as 3.229,000 pounds or 18 per cent of the total. Comparative data for 1931 for the two industries were respectively 2,051,000 pounds, 7 per cent, and 2,612,000 pounds or close to 9 per cent. Soya bean oil did not come into competition with other vegetable oils of edible nature in 1929 except in an extremely small way,—only 82,000 pounds "earmarked" for lard substitutes and but 11,000 pounds in oleomargarine. More soya bean oil has been used by the former industry in the past two years. For instance, during 1931, such consumption reached a total of 10,869,000 pounds or 39 per cent of the total, a sizeable gain when compared with the figure cited immediately above. The use of soya bean oil in oleomargarine was not shown to have broadened appreciably, this figure being 623,000 pounds. Furthermore, it is unlikely that any large amount will ever be utilized in the manufacture of oleomargarine "because the flavor is too pronounced and its appearance unattractive" (United States Tariff Commission Report, page 157). Also the imposition of a tax of ten cents per pound on natural yellow oleomargarine obviously will restrict the use of soya bean oil in such a product.

Other Vegetable Oils

OF the remaining edible vegetable oils listed in the census, olive oil would be by far the largest item were the figure not restricted to factory consumption. The greater part of this oil used in this country is merchandised to the housewife either in the original retail container in which imported, or is repackaged here from shipments of bulk oil from abroad and sold direct to the consumer. Production in the United States is limited to an average crop of two million pounds centered entirely in the State of California. Factory consumption in 1931 was recorded as an approximately similar amount (and not much larger in 1929), the bulk of which entered into the manufacture of salad dressings and related products.

Peanut oil factory consumption gained about 15 per cent between 1929 and 1931—total figures 11,851,000 and 13,543,000 pounds respectively. In the former year, over half, or 6,306,000 pounds (53 per cent) was utilized as an ingredient of oleomargarine. This percentage shrank to about one-third or 4,598,000 pounds last year. Another use in 1929 was in vegetable shortenings, 3,586,000 pounds or 30 per cent,—in 1931, close to 6 million pounds or 44 per cent. This is not an exact comparison as "other edible products" chiefly mayonnaise are credited with a factory consumption of nearly 1½ million pounds or approximately 10 per cent in 1931. As stated previously these products were included under "lard substitutes" in the 1929 statement. Soapers returned 1,667,000 pounds or 14 per cent as their share in the consumption for 1929. Apparently this was to a large extent "foots" for last year only a quarter million pounds of oil, possibly off quality product, were shown but 1,169,000 pounds of "foots" or around 9 per cent of the total were reported as consumed by the soap industry.

Despite its hideaway under the all-inclusive heading "other vegetable oils," sunflower seed oil is deserving of a word in passing. Sunflower seed has been grown for many years in the United States, primarily in the state of

Missouri, as a feedstuffs, but there have been only sporadic attempts to crush the seed for oil. Consequently all of this oil that is consumed is imported. Actual factory consumption data are lacking but knowledge of our imports affords a definite idea of the extent of our consumption. We imported over 27½ million pounds in 1931, a larger amount than ever before. The quantity coming in during the first quarter of this year was 13,631,000 pounds. This oil is understood to be well-suited for vegetable cooking fat formulae and is employed in general in that field.

Rapeseed oil was off in reported consumption from 13,327,000 pounds in 1929 to 8,782,000 pounds during 1931, a reduction of nearly 35 per cent. Virtually all is assigned under "miscellaneous products" and most of it undoubtedly was reported by the steel industry where it is employed as a quenching oil and by manufacturers of lubricating oils. Castor oil consumption fell off 40 per cent from 28,835,000 pounds reported in 1929. Nearly half of it that year was utilized by the textile industry and this was probably true likewise last year although not definitely determinable since the consumption in that industry was not published separately in the 1931 statement. Miscellaneous industries reported 8,145,000 pounds or nearly 30 per cent in 1929 and last year (including the textile industry), 72 per cent. Other users were the soapers credited with 13 per cent in 1929 and last year 17 per cent, and the paint and varnish industry returning 11 per cent both years. Some, but very little, castor oil is taken by the linoleum industry.

Olive Foots All for Soap

OLIVE oil foots to the total of 38,875,000 pounds in 1929 and last year somewhat more, about 39¾ million pounds were reported. This product is almost entirely a soap ingredient. In 1929, 5,858,000 pounds of inedible olive oil in 1929, and 7,482,000 pounds last year were reported consumed. In the earlier year, factory consumption was divided on nearly even terms between the textile and soap industries with a trifle short of a million pounds entered under "miscellaneous products." Nearly as much tonnage of consumption was returned by the soap industry in 1931 but the percentage shrank to roughly 30 per cent of the total. With the textile industry included under "miscellaneous industries," this group reported the remainder of last year's consumption. Vegetable tallow was almost wholly a soap ingredient in 1929 and entirely so last year. Consumption contracted from 8½ million pounds in the former year to 3¼ million pounds in the latter year.

Used More Tallow in Soap in 1931

FROM a factory consumption of roughly 515 million pounds of inedible and 28½ million pounds of edible tallow in 1929, there was a step up of 10 per cent

(*Turn to Page* 49)

CONSUMPTION OF OILS AND FATS IN SOAP INDUSTRY—1929-1931

(Including "Foots")†

	1929		1931	
	Pounds	Percentage of total**	Pounds	Percentage of Total**
Cottonseed Oil	167,033,000	12%	109,660,000	10%
Peanut Oil	1,667,000	14	1,413,000	10
Coconut Oil	393,914,000	60	371,696,000	62
Corn Oil	25,602,000	43	13,195,000	30
Soya bean Oil	6,396,000	36	5,441,000	20
Olive Oil, edible	23,000	1	14,000	..
Olive Oil, inedible	2,375,000	40	2,106,000	28
Olive Oil, foots	38,448,000	99	38,970,000	98
Palm kernel oil	44,532,000	60	31,179,000	58
Rapeseed oil	132,000	1	.....	..
Linseed oil	1,916,000	..	1,488,000	..
Vegetable tallow	8,404,000	100	3,256,000	100
Castor Oil	3,730,000	13	2,829,000	17
Palm oil	178,851,000	90	185,353,000	78
Sesame oil	4,835,000	48	10,528,000	24
Other vegetable oils	1,714,000	66	1,484,000	7
Edible animal stearine	503,000	1	53,000	..
Oleo oil	339,000	..	446,000	1
Tallow, edible	1,782,000	88	1,494,000	92
Tallow, inedible	451,835,000		523,714,000	
Grease	154,288,000	68	129,403,000	61
Neatsfoot oil	.....	..	33,000	..
Fish Oils	*130,634,000	76	59,978,000	50
Marine Animal Oils	.....	..	68,787,000	95
Total	1,618,953,000	38.6%	1,562,520,000	41%

* Includes Whale Oil—1929.
** Total consumption in all industries.
† Figures for 1931 include foots which did not appear separately in 1929.

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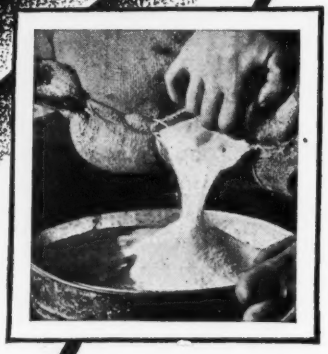

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Cleaning Products Output Down

The value of cleaning and polishing preparations made in the United States in 1931 amounted to $53,645,045 (at f.o.b. factory prices), a decrease of 12.7 per cent as compared with $61,433,418 reported for 1929, the last preceding census year, according to the U. S. Bureau of the Census. The items which make up the total for 1931 are as follows: Cleaning preparations, $38,134,301; metal polish, $2,727,650; automobile-body polish, $3,214,838; floor wax (liquid and paste), $4,844,920; other polishing preparations, $4,723,336. Statistics for 1931, with comparative figures for 1929, are given in the following tables. The figures for 1931 are preliminary and subject to revision.

Summary for the Industry: 1931 and 1929

	1931	1929
Number of establishments	356	429
Wage earners (average for the year)	2,384	2,713
Wages	$2,943,335	$3,356,161
Cost of materials, containers for products, fuel, and purchased electric energy	$16,393,737	$19,399,041
Products, total value	$48,392,131	$50,779,632
Cleaning and polishing preparations	$45,186,523	$46,969,447
Other products	$3,205,608	$3,810,185
Value added by manufacture	$31,998,394	$31,380,591

Production, by Kind and Value: 1931 and 1929

[The figures for 1931 represent production; those for 1929 refer to sales (shipments or deliveries) by manufacturers.]

	1931	1929
Cleaning and polishing preparations made in all industries, total value	$53,645,045	$61,433,418
Made in the cleaning and polishing preparations industry	$45,186,523	$46,969,447
Made as secondary products in other industries	$8,458,522	$14,463,971
Cleaning preparations	$38,134,301	$43,525,055
Metal polish	$2,727,650	$4,071,094
Automobile-body polish	$3,214,838	
Floor wax (liquid and paste)	$4,844,920	$13,837,269
Other polishing preparations	$4,723,336	

A second suit has been filed against U. S. Treasury officials asking damages for alleged illegal interference with the business of another shortening manufacturer. Olsen Food Products Company asks actual damages of $150,000 and punitive damages of $50,000.

A. J. Harris, general manager of Cincinnati Mailing Device Company, Cincinnati, has announced the appointment of H. E. Colburn, Rochester, New York, as a representative in eastern and central New York on "Cin-Made" fibre containers, mailing tubes and paper-winding cores.

Representatives of firms interested in the domestic soybean industry met in Washington, September 2 and 3. Among those attending and H. W. Galley, manager of the oils division of Staley Sales Corp., Decatur, Ill.

H. G. Weicker Sees Upward Trend Abroad

H. G. Weicker, Dodge & Olcott Co., New York, on his return from a recent two months' trip to Europe, reports a distinctly more optimistic feeling among foreign producers of essential oils. They are universally of the opinion that the bottom of the price curve has been reached and passed, he says, and agree that any future change cannot be otherwise than upward. It is the belief broad that the Lausanne agreement has been a long step forward in the preliminary adjustment of intergovernmental affairs necessary for a return to profitable business, and a strengthening of the financial and economic structure of all Europe is expected as an early result of its adoption. Prevailing opinion abroad is to the effect that the Lausanne agreement will be ratified, whatever the outcome of the coming American election.

The recent quickening of business in United States has already been reflected abroad, and producers of essential oils look forward to a better year in 1933 than they have had for the last few years. Crop shortages in some oils have acted as an additional factor in prompting producers to hold out for higher prices on future business.

Define Tax Status of Fatty Oils

Vegetable, animal and marine animal oils are exempt from the lubricating oil tax in the new revenue act, according to a decision of the U. S. Bureau of Internal Revenue, provided they are not sold for direct use as lubricants. Where the oils are not customarily used as lubricants no certificates of exemption from the tax will be necessary. In the case of fatty oils which have both lubricating and non-lubricating uses, however, the seller must get a certificate of exemption from purchasers who do not intend to use or resell the oils as lubricants. This matter was clarified in a recent letter by Commissioner of Internal Revenue David Burnet to John B. Gordon, secretary of the Bureau of Raw Materials for the American Vegetable Oils and Fats Industries.

Urge Increased Rosin Use in Soap

French naval stores interests urged that domestic soap manufacturers be allowed to use a greater proportion of rosin in their soaps as a move to aid the rosin industry at the recent International Naval Stores Conference, held at Bordeaux, France. At present the quantity of rosin used in the production of household soap is limited to 5 per cent, and estimates place the annual French output of household soap at approximately 250,000 metric tons. Based on 5 per cent rosin, consumption of this product by soap manufacturers is approximately 8,000 metric tons, whereas if the percentage is increased to 15 per cent probable consumption of rosin would be about 25,000 metric tons.

The Experiment Station of Hercules Powder Co. furnished a display of 58 naval stores samples which was exhibited at the recent Convention of the Georgia Forestry Association.

Norwegian Whalers Reject Oil Price

At a meeting of the Norwegian Whalers' Association, held in Sandefjord, Norway, at which all the companies sending floating factories for the 1932-33 season were represented, it was decided, with only one dissenting group, that none of its members would sell whale oil for the price offered of £10 per ton. During the conference whaling companies were approached regarding their policy and one of them replied that it did not propose to sell anything but awaited developments in Norway.

The price on pre-season contract for the last full production in 1930-31 was £25 per ton. Before the season ended in 1931, however, the open market price had dropped to £13 in Norway and London. The price offered for oil this year (1932-33) by buyers figures out equal only to 1.7c. per pound.

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Cuba Adopts Soap Tax

As a part of its emergency and financial program, the Cuban government, effective August 19, placed in effect a consumption tax on soaps of various kinds. A rate of $8.25 per 100 kilos was made effective on soap in perfumed bars for bath or toilet, in perfumed powder or liquid form, in cakes for bath or toilet, wrapped or not, perfumed or not, and medicinal soaps and castile or marsella; $1.55 per 100 kilos on ordinary laundry or scouring soap, in paste or liquid, cakes, bars, sheets or flakes or in powder and dye soaps. The consumption taxes are levied on the gross weight of the imports and are collected at the customhouse of entry in the case of imported goods and at the factory in the case of domestic goods.

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A proposed specification for scouring powder for use on glass has been drawn up by the Technical Committee on Soaps and Soap Products of the Federal Specifications Board, U. S. Bureau of Standards, in charge of F. W. Smither. Copies of this proposed specification may be secured by interested manufacturers by communicating with the Board at Washington.

—o—

Turkish toweling gloves, impregnated with soap in finely powdered form, designed for use of travelers and at the sea side, by simply wetting and rubbing together to work up a lather, have been put on the market in London. Each glove is supposed to provide sufficient soap for two or three baths.

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Laundry soap was first imported into China in 1896. The first Chinese soap works was built in 1905. The Japanese were active in the early days of the Chinese soap industry in building soap plants in China. The industry has grown largely within recent years. There are more than 50 soap plants in Shanghai and 40 in Tientsin. The estimated number of soap works in China is 120, not including the very small plants. *Chinese Economic Journal*, February, 1932.

SECURITY PRICES

PRICES of stocks of soap, chemical, insecticide, and allied companies as quoted on the New York Stock Exchange, Curb Exchange, other exchanges and over-the-counter are given in the following table. This table of prices is compiled monthly for *Soap* by a representative of one of the oldest and best-known brokerage houses in New York.

	High 1932	Low 1932	Aug. 1 1932	Sept. 1 1932
Allied Chem.	87½	42½	58¾	82¼
Am. Agric. of Del...	15⅜	3½	7	13⅛
Amer. Cyan. "B"..	8½	1⅝	3¾	8½
Armour of Ill. "A"..	2½	⅝	1½	2¼
Bon Ami "A"	51¼	31	38	45
Brillo	6⅝	4¼	4¼	4¼
Colgate, P. P.	31½	11	13¾	17¾
Consolidated Oil Co.	9	4	8	8
Corn Prod.	49¾	24¾	36	47¼
Coty	5½	1½	3½	4⅝
Dow Chem.	36	21½	27	34⅛
Drug, Inc.	57	23	34	45¾
Du Pont	59¾	22	29	39
Glidden	7¾	3⅛	4⅝	7½
Gold Dust	19⅝	8¼	14½	18⅛
Gulf Oil	43¼	23	33	39½
Int. Agric.	3½	¼	1¼	2⅛
Lehn & Fink	24¼	6	14½	18
Mathieson	20⅞	9	13	19¼
McKess. & Rob.	5½	1⅛	2½	4¾
Monsanto	30¾	13⅜	21⅜	23⅞
Proc. & Gam.	42¾	19⅞	26⅝	32⅜
Shell Union	7⅛	2½	5⅛	6½
Sher. Will	35	19⅜	23	25¼
S. O. of Cal.	30¼	15⅛	25⅛	28⅜
S. O. of Ind.	25	13⅛	21⅜	23⅞
S. O. of N. J.	36¾	19⅞	30⅞	34⅝
S. O. of Ohio	30⅛	15½	26	25¾
Swift & Co.	18⅞	7	11⅞	10
Union Carb.	36⅜	15½	20¼	28⅜
Westvaco	12⅝	3	5¾	10
Wilson & Co.	1¾	⅝	1	1¾

—o—

Imports of castile soap into United States during June, 1932, totaled 158,377 lbs., worth $12,156, as compared with 341,883 lbs., valued at $30,665 during the same month of 1931. Imports of toilet soap in June, 1932, were 42,028 lbs., worth $13,366, as against 89,276 lbs., priced at $25,716 during June, 1931.

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Exports of toilet and fancy soaps from United States during July, 1932, totaled 619,724 lbs., worth $85,459, as against 486,270 lbs., worth $100,895, during July, 1931. Totals for laundry soap exports for July, 1932, were 1,565,506 lbs. and $72,418, as against 1,727,981 lbs. and $107,454 for July, 1931.

CHICAGO TRADE NOTES

THE thirteenth annual convention of the American Cosmeticians Association was held at the Hotel Sherman starting Monday morning, Aug. 22, with an address of welcome by the president, Mrs. M. B. McGavran, and closing Wednesday evening, the twenty-fourth, with a Mock Marriage and exhibition of period styles in coiffures and gowns in the Louis XVI Room. About four thousand delegates and members signed the visitors register during the three days and there was continuous activity in and about the booths that filled the grand ballroom and overflowed into the mezzanine. The forty exhibitors provided demonstrations and displays that were decidedly stimulating and suggestive of new ideas. Miss Frances Martell, executive secretary, expressed gratification at the attendance. The manufacturers who made the most extensive displays were: Colgate-Palmolive-Peet Co., Consolidated Hair Goods Co., Duart Mfg. Co. Ltd., E. Frederics, Inc., Marinello Company, The Murle Company, Nestle Le Mur Co., Western Hair Goods Co., Gibbs and Company, Boyer International Laboratories, Ruth D. Maurer Corp., and Wm. Meyer Company. Next year's convention will also be held at the Hotel Sherman at about the same time.

—o—

Members of the Golf Auxiliary of the Chicago Perfumery, Soap and Extract Association and the Chicago Drug and Chemical Association were for the most part undeterred by a drizzling rain on the morning of Tuesday, August 9th, forty appearing in attendance at the season's fourth tournament. The official tee-off time was set for 1:30. All but a few made the complete round of the course, and the following prize-winning scores resulted: Class A: first prize, H. Larson, of Hazel-Atlas Glass Co., with 82-8, net 74; second prize, A. C. Drury, of A. C. Drury & Co., with 84-7, net 77; third prize (after toss-up), J. Wilhelm, of George Lueders & Co.; fourth prize, Walter H. Jelly, of Walter H. Jelly & Co., with 88-11, net 77. Class B: first prize, P. W. Shannon, of Harriet Hubbard Ayer, Inc., with 100-25, net 75; second prize, A. J. Anderson, of Richard M. Krause, Inc., with 98-22, net 76; third prize, H. E. Lancaster, of Marshall Field & Co., with 100-24, net 76; fourth prize, Harry Hitzman, association attorney, with 104-27, net 77. Class C: first prize, Frank Robinson, of Monsanto Chemical Works, with 120-33, net 87; second prize, M. V. Pennal, also of Monsanto, with 124-35, net 89; third prize, Joe DeLorme, of Riviera Products Co., with 150-48, net 102. Guest prizes were awarded to B. Kisselberg with 91-20, net 71; and Ray A. Morris, with 95-22, net 73. The tournament was held at the Itasca Country Club. The final tournament of the season was held on Tuesday, September 13, at the Medinah Country Club.

—o—

Chicago Perfumery, Soap and Extract Association opened its series of Fall meetings at a noon luncheon at the Hamilton Club on Wednesday, September 7th. Motion pictures taken at the various golf tournaments were shown and received with laughter and applause. Meetings hereafter will fall on the first Wednesday of each month. The Chicago Drug and Chemical Association's first meeting will come somewhat later, falling, as in the past, on the last Thursday of the month, or the 29th. Third, too, will be in the form of a noon luncheon at the Hamilton Club.

—o—

Victor Chemical Works has taken space and made arrangements for an exceptionally interesting exhibit in the Hall of Science at the Century of Progress Exposition. A working model of the factory will be shown, and the uses of its products will be demonstrated. Bristol-Myers Co. has taken over 2200 square feet of space in the Hall of Science with a complete group of machines in operation, to show all processes from making tin tubes to filling them with Ipana Tooth Paste.

—o—

The National Hairdressers and Cosmetologists Association plans this year to hold a "floating convention" in the form of a cruise on the Great Lakes from September 10th to the 16th. It is expected that over 800 members from all over the country will be present and demonstrations and general promotional work will alternate with entertainment features.

—o—

W. E. Rowe, purchasing agent of Swift & Co., has been taking a late August vacation at his country home at Hudson Lake, Indiana.

—o—

Early September will mark the opening of a new, completely modern beauty shop in the retail store of Marshall Field & Co.

—o—

Charles H. Alker, vice-president of Orbis Products Trading Co., New York, died August 15 at his home in Bloomfield, N. J. He was sixty years old and had been in charge of the essential oil department of Orbis Products Trading Co. since its formation in 1918.

—o—

MODERN SOAP PERFUMES, by Frank H. Sedgwick. Published by the *Soap Trade & Perfumery Review*, London. 6½ x 8¼. Paper cover. 60 pages. In this practical handbook Mr. Sedgwick summarizes points developed in a series of articles on the science of soap perfuming which appeared in the *Soap Trade & Perfumery Review* during 1931. The author has had considerable practical experience in the British industry which puts him in position not only to lay down the general principles of soap perfumery but also to offer some novel and useful suggestions on compounding. He calls attention to a number of raw materials sometimes overlooked, and suggests possible applications. The introduction is by W. H. Simmons. Our reviewer comments on the odor of the book itself. A little perfume added to the printing ink used on this perfuming handbook would not have been amiss.

TOWARD A NEW HIGH!

VATROLITE

SODIUM HYDROSULPHITE

REG. U.S. PAT. OFF.

Bleaches Dark Soap Stocks

Note well the name! . . VATROLITE . . actually Sodium Hydrosulphite . . a significant expression of chemical purity . . of full and uniform chemical strength.

VATROLITE treatments produce a notable color reduction in Soap stocks . . in darker colored fats and greases . . the lightening of certain dark shaded Soaps.

VATROLITE is decidedly anti-oxidant in its effect . . multiplying its value by the insurance against rancidity in Soaps and technical oils.

Here . . on an immediate shipping schedule . . you'll find VATROLITE in *any* desired quantity. Packaged in damp-proof, tin-lined containers weighing 50, 100 and 250 lbs.

Working samples at your option . . free!

ROYCE CHEMICAL COMPANY

Manufacturing Chemists

CARLTON HILL · NEW JERSEY

NEW ENGLAND REPRESENTATIVES: RICHARD HAWORTH, Inc., 25 FOUNTAIN STREET, PROVIDENCE, R. I.

Made by the originators of DISCOLITE and VELVORAY

Say you saw it in SOAP!

New Irish Soap Tariff Rates

New tariff schedules of the Irish Free State on soaps provide rates of 37½% on toilet and shaving soaps, soap powders and soap substitutes, and 22½% on other types of soaps, as against previous rates of 20% and 10% respectively. Preferential rates of 25% and 15% are accorded to British soaps, where under the previous tariff no preference was allowed. The preference is not liable to be of particular advantage to British soap firms as with the protection of the new higher rates the domestic Irish industry will be in a much stronger competitive position.

—o—

Naugatuck Develops Aromatic Line

Naugatuck Chemical Co., Naugatuck, Conn., is expanding its line of aromatic products for the soap, perfume and cosmetic trade, and will shortly offer a series of new aromatic products through Bushfield, Inc., New York. The first products developed for the aromatic consuming trade were alpha amyl cinnamic aldehyde, undecalactone, heptyl alcohol, heptyl heptoate, heptoic acid and ethyl heptoate. This line is to be expanded and will shortly include numerous other synthetic products developed from the same bases, and other products such as phenyl acetic acid and phenyl ethyl alcohol.

Through the branches of the parent company, United States Rubber Company, in the East Indies, natural oils will also be collected, these including citronella, vetivert, lemongrass and other oils. Vetivert acetate, ionones, geraniol, citronellol and their esters are being manufactured, and the line will shortly include hydroxycitronellal and acetophenone.

Naugatuck Chemical Co. is headed by Elmer Roberts, with G. P. F. Smith as assistant to the president and M. G. Shepard as chief chemist. Laboratories are maintained in collaboration with General Laboratories, Passaic, N. J. Bushfield, Inc., New York, headed by Burton T. Bush, a well-known figure in the essential oil and aromatic chemical trade, handles sales.

—o—

Bon Ami Co. and subsidiaries reports net profit of $534,905, after taxes, depreciation and other charges, equivalent to $2.42 a share on Class A shares and $1.46 a share on class B shares. This compares with $650,943, or $3.00 on class A and $1.75 on class B, in the same period of 1931. For the quarter ended June 30, 1932, net profit equalled $304,108 as against $355,672 in the same quarter of last year.

—o—

Another report of use of locusts in soap comes from Tunis where it is stated that French soap and fertilizer manufacturers have communicated with the Tunisian Government offering to buy large quantities of dried locusts. The bulk of this year's locust invasion has been destroyed, but the authorities promise that deliveries of salted and dried locusts can be guaranteed next year.

—o—

N. W. Ayer & Son, Inc., has been appointed to handle the foreign advertising of Elizabeth Arden, Inc.

Bulletin on Vegetable Oil Tariff

John B. Gordon of the Bureau of Raw Materials for American Vegetable Oils and Fats Industries has issued a ten page bulletin responding to the recent drive of the Texas Cottonseed Crushers' Association for a tariff on all imported vegetable oils, oilseeds, copra, etc. Mr. Gordon accuses the Cottonseed Crushers of using figures from the recent Bureau of Census report on oils and fats which are deemed favorable to their cause and failing to mention the other figures. He points out that with a yearly export of edible fats and oils from the United States of 700 million pounds, it is futile for the crushers to argue that it is possible to raise price levels in the United States by means of a tariff. The bulletin gives a complete analysis of the fat and oil production, consumption and import situation in the United States. Further information regarding the bulletin and the data which it contains may be secured from Mr. Gordon at 1251 National Press Building, Washington, D. C.

—o—

American Standard Mfg. Co., 2509 Lime St., Chicago, has completed a test marketing campaign on its new Krebs *camelized* sponges. It is stated that in actual use under almost every condition, these new sponges stand up as well as natural sponges at a marked saving in cost. The new sanitary accessory is available in three sizes for the jobbing trade.

—o—

An attempt to discover the commercial possibilities of the white whale is now being made by the Canadian National Railways. If the oil content of these mammals is found to be sufficiently high, it is probable that a refinery will be established at Churchill, Canada. A shipment of seven whales has been brought to Winnipeg for study.

—o—

The story behind the current advertising of Monsanto Chemical Works, St. Louis, is told in an article in August Printers' Ink, entitled "But Our Product Can't Be Pictured." One of the advertisements commented on appears in the current issue of *Soap*.

—o—

Net income of Coty, Inc., for the six months ended June 30 amounted to $311,973, equal to 20c a share, as compared with $433,909 or 28c a share in the corresponding period of 1931.

—o—

Imports of laundry soap into Ceylon during 1931 amounted to 4,977,500 pounds, while that of toilet soap was only 543,000 pounds. About fourteen per cent came from the United States.

—o—

Imports of crude glycerin into United States during July, 1932, totaled 74,267 lbs., worth $1,484. Imports of refined glycerin were 130,990 lbs., valued at $7,830.

—o—

Budd Aromatic Chemical Co., New York, has increased its capitalization from 100 no-par shares to 500 shares of $100 preferred and 3,000 shares of no-par stock.

for your soap products—

STAUFFER BRAND

Caustic Soda

"STAUFFER BRAND" Caustic Soda can be supplied either solid or liquid, in drums or tank cars. It is uniform, pure and worth while using in your soap products. Send your next Caustic Soda inquiry to us.

also makers of Carbon Tetrachloride *for cleaners*

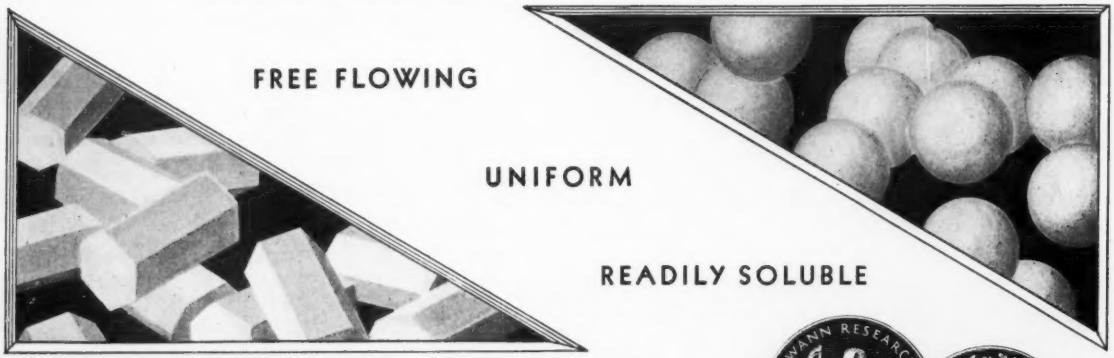
STAUFFER CHEMICAL COMPANY

Plants
Niagara Fall, N. Y.
Los Angeles, Cal.

Office
420 Lexington Ave.
New York City

SWANN T.S.P.

CRYSTALLINE OR GLOBULAR



FREE FLOWING

UNIFORM

READILY SOLUBLE

SWANN CHEMICAL CO.

DIVISION OF THE SWANN CORPORATION

BIRMINGHAM

BALTIMORE
BOSTON
CHARLOTTE

CINCINNATI
DALLAS

NEW YORK
PITTSBURGH
ST. LOUIS

Say you saw it in SOAP!

PERSONAL AND IMPERSONAL

Potter Drug & Chemical Corp., Malden, Mass., maker of "Cuticura" soap and other toilet preparations, has announced that it is absorbing the Federal excise tax on its products and consequently there has been no advance in selling prices.

—o—

The new plant of the Original Bradford Soap Works at West Warwick, R. I., where operations of the concern are now concentrated, has been equipped with the latest in soap making machinery. Numerous storage tanks, each capable of taking care of a carload of oil, have been installed, as well as seven new soap kettles with a capacity of a carload each and new Proctor & Schwartz drying machine of the latest type. The plant was acquired from B. B. & R. Knight Corp.

—o—

George L. Brown, vice-president of J. T. Robertson Co., Syracuse, has been elected president of Plymouth Products Co., Syracuse. The latter concern manufactures soap and soap flakes.

—o—

Jays Chemical Corp., Brooklyn, N. Y., have begun operations in their new plant at 4001 40th Street, manufacturing liquid soaps, moth preparations, face powders, and special toilet soaps for export.

—o—

J. H. Black has become associated with the Gulf & Valley Cotton Oil Co., Gretna, La., in charge of soap manufacture.

—o—

A new soap plant has been opened in Brockton, Mass., by Twill Products Co. Richard Page heads the new enterprise.

—o—

Polak's Frutal Works, New York, importers and manufacturers of perfuming specialties for soaps and sanitary products, have just received a case of 28 cakes of soap from their parent organization in Holland. Each cake is perfumed with a new specialty odor for cake soap.

—o—

A new concern recently started in Highland Park, near Detroit, to engage in production of mechanics' and industrial soaps, has been incorporated and reorganized as the Clean-Clean Manufacturing Co. Homer Lambert, formerly a partner, has left the company, and August G. Klein is now sole head of the concern.

—o—

Albert Pick & Co., Chicago, manufacturers of liquid soaps, have taken new quarters at 1200 West 35th Street.

Pacific Soap Co. has opened a new plant in Modesto, Cal., with Frank J. Scanlan as manager.

—o—

The American Medical Association has refused to grant its approval to "Fissan" soap and other products of Walter Lehn, Clifton, N. J., because the names are unacceptable, advertising claims are extravagant and no adequate statement of composition has been supplied.

—o—

Samuel M. Best has been elected president of Potter Drug & Chemical Co., Malden, Mass., maker of "Cuticura" soap and other preparations. He succeeds the late Charles L. Hamilton. Mr. Best's position as vice-president is taken by William G. Gooch, formerly secretary-treasurer.

—o—

The New York office of Magnus, Mabee & Reynard. Inc., essential oils, was the scene, September 4th, of the celebration of the fiftieth anniversary of the beginning of the electric power and light industry. It was in a building on this site that an electric plant supplying the first underground central station system in this country and forming the origin of New York's present electrical system began operation September 4th, 1882.

—o—

William Cooper Procter, chairman of the board of Procter & Gamble, was a member of the central committee of trade leaders which met in Washington last month to form a directing unit for a business recovery drive and to discuss and formulate plans to deal with the current business situation.

—o—

Hygienic Products Co., Canton, Ohio, has been denied registration of a trademark for a cleaning powder consisting of a number of yellow panels with blue borders. The U. S. Patent Office ruled that such package labels are common and so cannot function as trademarks.

—o—

The Soybean Oil & Meal Co-Operative Company of Canada is about to start operations at Chatham, Ont., where it has installed a crushing plant which is expected to handle about 100,000 bushels of soybeans this season. Ed Smith, chief engineer of Archer-Daniels-Midland Co., supervised installation of the equipment.

—o—

Registration of "Sano-Bath" with the United States Patent Office as a trademark for shampoos, bath preparations, etc., has been refused Adelaide Ortegat, Paris, France, due to prior registration of the mark "Zanol" by American Products Co., Cincinnati.

Creditors of Marx & Rawolle Corp., glycerin and varnish dealer, Springdale, Conn., filed a petition in bankruptcy August 22nd. Details concerning assets and liabilities are not yet available.

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Swift & Co. is erecting a two-story addition to its Vernon, Cal., shortening plant. The estimated cost is $32,000.

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Mennen Company has recently introduced a new brushless shaving cream to retail at 50 cents. The new product which completes the Mennen shaving preparation line is being featured in all regular advertising and is also receiving attention in a strong newspaper campaign.

—o—

Trujoy Soap Co., Ltd. has been registered in the United Kingdom for manufacturing and dealing in soaps, washing materials, oils, greases, and perfumes. The capital (nominal) is £2,000 and the registered address is 26 Brazennose St., Clayton, Manchester. The directors of the enterprise are H. H. Jones, A. E. Twigg, W. Parkinson and A. J Firth.

—o—

A unique soap packaging novelty introduced in England recently is the Vinolia soap golf ball. The package contains six soap golf balls and six tee pegs of a well-known make. The cover of the box, which is hexagonal in shape, is of transparent cellophane. The sides of the box are covered with white imitation leather.

—o—

A new soap manufacturing process for a flake or powder quickly soluble in cold water, including hard and salt waters, is being offered to American soap firms by Dr. Julius Schall, German soap expert. It is stated that the new type soap is suitable for use as powder or flake, for textile uses with slight modifications, for toilet soaps by adding one part to each two parts of regular stock chips, for floating soaps, and in shaving soaps. The complete manufacturing time is said to be less than four hours, and there is no nigre in the process. L. Geismar, New York, is acting as American agent in the sale of the process rights.

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Fred J. Werner and his son, John F. Werner have organized the firm of F. J. Werner & Son, 353 Fifth Avenue, New York, to specialize in oils used in the soap, paint, varnish and printing ink industries. Mr. Werner, senior, has been connected with the vegetable oil industry for over twenty-five years, having been with Kelloggs & Miller, Spencer, Kellogg & Sons, and recently with G. A. Wharry & Co.

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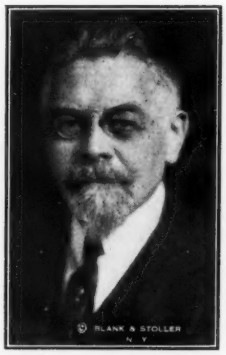
Data on the actual difference in soap consumption in towns having hard and soft water formed the basis for a paper presented before the recent Denver meeting of American Chemical Society by H. W. Hudson and A. M. Buswell. The report indicated that the saving in soap alone with softened water would more than pay the cost of water softening.

P. R. Dreyer Dies Suddenly

Peter R. Dreyer, head P. R. Dreyer Inc., New York, died suddenly, August 30, at his summer home in Darien, Conn., following a heart attack. Mr. Dreyer was sixty four years old, and had been a widely-known figure in the essential oil and consuming industries over the past thirty years. He was born in 1868 in the Estate of Kehlet, Sillerup, Denmark, and was educated at Hadersley College, Denmark. After coming to United States as a young man in 1899, his first connection was with Markt & Co., followed by employment with Coombs, Crosby and Eddy. He later was a partner in Diehl & Dreyer and subsequently organized the firm of P. R. Dreyer. In 1909, he became vice-president of Stanley Jordan Co., and in 1910 he joined Ungerer & Co., staying with the latter concern until 1918. In 1918 to 1922, he acted as general manager of the essential oil department of Rockhill & Vietor, and in May, 1922, again entered business under his own name. Funeral services were held privately September 1 in Darien with interment at Kensico Cemetery. He is survived by his wife, Elizabeth Rosalie Eppinger Dreyer, and a daughter, Mrs. Orin Isbell.



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The soap industry of Denmark has expanded considerably in recent years so that the needs of the home market now depend on imports only to the extent of 6%, according to a recent report of the Danish Industrial Association. The number of factories increased from 28 in 1929 to 33 in 1930. The following are the output figures of the various classes of soap in tons during 1930, the figures in brackets being the corresponding ones for 1929:—Soft soap, 21,348 (20,218) : hard soap in blocks, 2,959 (2,906) ; hard soap for domestic and laundry uses, 2,533 (2,619) ; soap chips, 4,160 (3,590) ; other hard soaps, 105 (129) ; soap powder 3,770 (2,126) ; and glycerine, 327 (317). Prices fell during 1931 owing to the competition between the various makers, but this fall was compensated for by the greater decline in the prices paid for raw materials.

—o—

Brillo Manufacturing Co. reports net profit of $57,671 for the first six months of 1932, equal to 19c. a share on 160,000 shares. This compares with $160,640, or 83c. a share in the first half of 1931. Current assets on June 30, 1932, were $585,693 and current liabilities, $85,998, as compared to $623,519 and $107,321 on the same date last year.

—o—

According to a report from U. S. Consul Quarton at Havana, there was exported from Cuba to Haiti, during the first fifteen days of August, 1932, 59,165 pounds of laundry soap.

CONTRACTS AWARDED

Holbrook Mfg. Co., Holbrook, N. J., has been awarded the contract for 5,400 lbs. castile soap for Fort Sam Houston Quartermaster at a price of 9.5c. Newell-Gutradt Co., San Francisco, awarded 18,700 lbs. leather soap at 5.79c. H. Kohnstamm & Co., Chicago, awarded 12,000 lbs. caustic soda at 7.1c. Solvay Sales Corp., St. Louis, awarded 1,120 lbs. laundry soda at 2.5c. Couray Products Co., New York, awarded 1,000 lbs. soda ash at 3.3c. James H. Rhodes & Co., L. I. City, awarded 10,800 sponges at 2.78c. Schroeder & Tremayne, Inc., St. Louis, awarded 24,700 sponges at 5.5c.

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Nemo Chem. Co., has been awarded the contract for 900 pints metal polish for the Brooklyn U. S. Army Quartermaster at a price of 5.8c and 24 quarts at 10c. Swift & Co. awarded 250 lbs. soap powder at 3.09c, 60 lbs. at 3.1c. and 100 lbs. at 3.2c. Couray Products Co. awarded 60 pints metal polish at 9.5c, and 60 gals. exterminator at 44c. Sherwin-Williams Co. awarded 60 gals. disinfectant at 36c. Leeno Products, Inc., awarded 60 gals. exterminator at 78c. Unity Sanitary Supply Co. awarded 1,250 lbs. detergent powder at 5.5c. J. Eavenson & Sons, Inc., awarded 1,000 lbs. soft soap at 4.25c and 480 pkgs. soap powder at 7c.

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Leeno Products Co., Baltimore, has been awarded the contract for 575 pints metal polish for Fort Sam Houston Quartermaster at a price of 13c. Braunschweig-Briam-Reich Co., San Antonio, awarded 2,350 cakes stove polish at 5c. Boyle Mfg. Co.. Los Angeles, awarded 70 mop wringers at $1.90. San Antonio Broom Factory, San Antonio, awarded 8,700 mops at 14.5c. Godart Constn. & Equipment Co., San Antonio, awarded 600 rattan brooms at 49.5c.

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Carden-Drury Chemical Works, Philadelphia, has been awarded the contract for 150 gals. carbon tetrachloride for Frankford Arsenal, Pa., at a price of 83.8c. Enterprise Oil Co., Philadelphia, awarded 700 gals. lard oil at 34.5c.

—o—

Alex C. Fergusson Co., Philadelphia, awarded the contract for 10,000 lbs. flake naphthalene at 3.58c.

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The following low bids were entered on material to be supplied to the Veterans' Administration procurement division in a recent bidding: Sherwin-Williams Co., Washington, 750 gals. cresol compound solution, $431.50; Newell-Gutradt Co., San Francisco, 20,600 lbs. grit soap, $741.60, and 24,400 lbs., $915; George E. Marsh Co., Lynn, Mass., 18,600 lbs. toilet soap, $750.06 and 21,700 lbs. laundry soap, $817.78; Colgate-Palmolive-Peet Co., Chicago, 1,200 lbs. white soap, 6.72c lb. and 43,400 lbs. chip soap, $1,926.90; R. M. Hollingshead Co., Camden, N. J., 1,800 gals. liquid soap, $397; Armour & Co., Chicago, 8,000 lbs. castile soap, 7.51c, and 14,400 lbs. scouring compound, 2.65c; Colgate-Palmolive-Peet Co., 225,000 lbs. salt water soap, $5,190; and Uncle Sam Chemical Co., New York, 25,200 lbs. sweeping compound, $322.80.

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In the August issue of *Soap* it was erroneously reported that Miller & Graham had been awarded a contract for 1,080,000 lbs. laundry soap for the Brooklyn U. S. Army Quartermaster at a price of $2.32c. The successful bidder was Armour & Co.

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Impervious Paint & Varnish Co., Philadelphia, has been awarded the contract for 2,000 lbs. floor wax for the West Point Quartermaster at 11.4c.

—o—

A proposed commercial standard for the grading of sulphonated oils of saponifiable types has been submitted by the United States Bureau of Standards to producers, sellers, and consumers of these oils, the purpose being to secure trade acceptance of this standard. The proposed standard was adopted by a general conference of manufacturers, distributors, and users of sulphonated oils, held in New York, recently, and will become effective Sept. 1.

—o—

The use of sodium silicate with caustic soda in neutralizing free fatty acid in fatty oil refining, and in settling the residue to a smaller volume with a consequent smaller loss of oil in the soap stock, is recommended in Silicate P's & Q's of the Philadelphia Quartz Co., Vol. 12, No. 9.

—o—

Charges of dumping vanillin and coumarin in the United States by importers in violation of the Tariff Law have been filed with the Treasury Department at Washington.

—o—

Imports of crude glycerin into United States during June, 1932, totaled 101,840 lbs., worth $3,946. Imports of refined glycerin totaled 99,204 lbs., valued at $6,173.

The best time to make the best soap better

"CEREPS"

The addition of small quantities will improve appearance and lathering quality.

It gives the superfat cosmetic quality, will not become rancid, has great emulsional capacity, absorbs water easily. Soap treated with CEREPS will not become dry or cracked — is firm and pleasantly smooth.

It will diminish the irritation of any excess alkali.

Samples and prices gladly furnished by

WELCH, HOLME & CLARK CO., Inc.

563 Greenwich St. **New York**

Established 1838

Agents for:
CHEMISCHE FABRIK MAHLSDORF, Berlin-Mahlsdorf.

Caustic Soda
High Grade—Solid or Liquid Form

Carbon Tetrachloride
Redistilled—water white—supplied also in combination with other solvents to meet individual requirements

Tri-Sodium Phosphate
Fine granular and powdered. Free-flowing and non-caking

STANDARD WARNER CHEMICALS

The WARNER CHEMICAL CO.

Chrysler Bldg. **New York City**

Phone MUrray Hill 2—0262

Say you saw it in SOAP!

RECORD OF TRADE-MARKS

The following trade-marks were published in the August issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

Trade Marks Filed

LEE CLEANSER—This in solid letters in circular band, describing household cleanser. Filed by Lee Products Co., Lee., Mass., June 2, 1932. Claims use since April 1, 1932.

AMULCO—This in broken letters describing soap. Filed by Leon R. MacKenzie, Des Moines, June 20, 1932. Claims use since Sept., 1931.

NUSEP—This in solid letters describing antiseptic. Filed by D C A Drug Stores, Inc., Portland, Ore., June 1, 1932. Claims use since May 15, 1931.

O-BRITE-O—This in irregular-shaped outline letters describing liquid floor wax. Filed by Selig Co., Atlanta, June 14, 1932. Claims use since Aug. 13, 1931.

FOAMO KLEANZIT—This on circular-shaped reverse plate describing cleaners for fabrics. Filed May 31, 1932 by Foamo Kleanzit Co., Waseca, Minn. Claims use since May 17, 1922.

GEN-O-SAN—This on cross-shaped reverse plate, printed vertically and horizontally, describing antiseptic. Filed by Gen-O-San Co., Los Angeles, Feb. 25, 1931. Claims use since Nov. 1, 1930.

PARAZENE—This in solid letters with "Du Pont" seal, describing moth repellent. Filed by E. I. du Pont de Nemours & Co., Wilmington, May 10, 1932. Claim use since May 4, 1932.

SKETCH OF WOMAN cleaning toilet, describing cleaning powder. Filed by Hygienic Products Co., Canton, Ohio, June 6, 1932. Claims use since Oct. 3, 1927.

SANI-FLUSH—This in solid letters describing cleaning powder. Filed by Hygienic Products Co., Canton, Ohio, June 6, 1932. Claims use since Apr. 1, 1922.

SOLNIC—This in solid letters describing insecticide and animal dip. Filed by Amtorg Trading Corp.. New York, June 8, 1932. Claims use since March, 1932.

AVALON—This in solid letters describing soap flakes. Filed by Wesco Foods Co., Cincinnati, June 22, 1932. Claims use since Apr. 1, 1932.

ALYMP-OL—This in solid letters describing soap, cleaner and polish. Filed by Alymp-Ol Soap Works, Taunton, Mass., June 27, 1932. Claims use since May 26, 1932.

C-COAM—This in solid letters describing sweeping compound. Filed by Chemical Corp. of America, Minneapolis, Minn., July 5, 1932. Claims use since May 10, 1932.

LILACKO SPRAY—This in solid letters describing insecticide. Filed by J. H. Raymond, San Francisco, Mar. 14, 1932. Claims use since Apr. 1, 1924.

NOMOLE—This in solid letters describing mole exterminating preparation. Filed by C. B. Dolge Co., Westport, Conn., May 24, 1932. Claims use since December, 1931.

QUINOLOR—This in solid letters describing germicidal preparations. Filed by E. R. Squibb & Sons, New York. June 9, 1932. Claims use since June 6, 1932.

WELWOOL—This in solid letters, printed vertically and horizontally within circle, describing mothproofing preparation Filed by George S. Eaton, New York, June 10. 1932. Claims use since Feb. 16, 1932.

ARTEX—This in broken letters describing insecticide. disinfectant and deodorant. Filed by American Oil Co., Baltimore, June 14, 1932. Claims use since Sept. 1, 1931.

ANTRAP—This in solid letters describing insecticide. Filed by Southland Chemical Co., St. Petersburg, Fla.. June 23, 1932. Claims use since Nov. 16, 1931

VELVET—This in solid letters describing insecticides and fungicides Filed by H. A. Dubois & Sons, Cobden. Ill., July 12, 1932. Claims use since 1922.

LETTER "G" in outline form, crossed by band of color, describing shaving cream. Filed by Gillette Shaving Cream Co., Pittsburgh, Pa., July 18, 1931. Claims use since June 10, 1929.

GUNK—This in script on circular-shaped reverse plate, together with sketch of helicopter, describing liquid soaps and cleaners. Filed by A. F. Curran Co., Malden, Mass.. Mar. 21, 1932. Claims use since Feb. 10, 1932.

FANNA—This in solid letters describing cleanser and polish. Filed by Fanna Polishine Co., Brooklyn, Apr. 4, 1932. Claims use since Feb. 26, 1932.

ZEL-RAY—This in solid letters against sun as a background, describing soaps, soap powders, soap flakes and cleaners. Filed by Zeller Products Co., New York, June 2, 1932. Claims use since May 23, 1932.

ZEN—This on reverse plate describing metal polish. Filed by H. & H. Zbinden, Brooklyn, July 8, 1932. Claims use since July 7, 1932.

CALTOX—This in solid letters describing insecticides, germicides and fungicides. Fled by Californiai Spray-Chemical Corp., Berkeley, July 5, 1932. Claims use since Jan. 8, 1932.

FLOTOX—This in solid letters describing insecticides, germicides and fungicides. Filed by California Spray-Chemical Corp., Berkeley, July 5, 1932. Claims use since Feb. 16, 1931.

NAPSUL—This in solid letters describing insecticides, germicides and fungicides. Filed by California Spray-Chemical Corp., Berkeley, July 5, 1932. Claims use since May 14, 1932.

Trade Marks Granted

296,204. Liquid Insecticide. Midway Chemical Co., Chicago. Filed April 20, 1931. Serial No. 313,574. Published September 29. 1931. Class 6.

296,229. Insecticides. Atlantic Pharmacal Co., Boston. Filed March 4, 1932. Serial No. 324,771. Published May 17, 1932. Class 6.

296,294. Tooth Paste. Walgreen Co., Chicago. Filed January 4, 1932. Serial No. 322,719. Published May 3, 1932. Class 6.

296,306. Cleaning Compound. Phoenix Oil Co., Cleveland. Filed March 24, 1932. Serial No. 325,439. Published May 17, 1932. Class 4.

296,319. Medicinal and Toilet Soap. E. T. Browne Drug Co., New York. Filed April 7, 1932. Serial No. 325,868. Published May 17, 1932. Class 4.

296,324. Cleanser. Bullen Chemical Co., Folcroft, Pa. Filed March 28, 1932. Serial No. 325,560. Published May 17, 1932. Class 4.

296,345. Insecticide. Brundage Bros. Co., Toledo. Filed March 14, 1932. Serial No. 325,086. Published May 17, 1932. Class 6.

296,350. Antiseptic. Farastan Co, Philadelphia. Filed March 16, 1932. Serial No. 325,165. Published May 17, 1932. Class 6.

296,351. Insecticides. Sherwin-Williams Co., Cleveland. Filed March 17, 1932. Serial No. 325,243. Published May 17, 1932. Class 6.

296,422. Cleaner and Polish. Cornish Mining Co., Cornish, Me. Filed March 24, 1932. Serial No. 325,424. Published May 24, 1932. Class 4.

296,431. Polishing and Cleaning Preparations. Wohl Shoe Co., St. Louis. Filed April 14, 1932. Serial No. 326,122. Published May 24, 1932. Class 4.

296,442. Disinfectant. Chipman Chemical Co., Bound Brook, N. J. Filed March 8, 1932. Serial No. 324,881. Published May 31, 1932. Class 6.

296,478. Toilet-Bowl Cleaner. Toil-Gien Products Co., St. Louis. Filed March 4, 1932. Serial No. 324,796. Published May 31, 1932. Class 4.

296,484. Liquid Shampoo. Frederick Eugene Ischerland, Flint, Mich. Filed February 1, 1932. Serial No. 323,664. Published May 31, 1932. Class 6.

296,563. Washing Fluid. Disinfectant and Deodorant. A. Yanni & Son, McKeesport, Pa. Filed April 6, 1932. Serial No. 325,861. Published May 24, 1932. Class 6.

296,603. Polish. El Sol Products Co., Camden, N. J. Filed April 15, 1932. Serial No. 326,147. Published May 31, 1932. Class 16.

296,723. Furniture and Automobile Polish. Shell Oil Co., San Francisco. Filed December 29, 1930. Serial No. 309,444. Published May 24, 1932. Class 16.

296,765. Liquid Soap. Creco Co., Long Island City, N. Y. Filed August 29, 1931. Serial No. 318,550. Published June 7, 1932. Class 4.

296,791. Shaving Cream. Prodermatect Co., Scottdale, Pa. Filed February 19, 1932. Serial No. 324,322. Published June 7, 1932. Class 4.

296,798. Insect Powders. Joe Lowe Corp., Brooklyn. Filed March 8, 1932. Serial No. 324,898. Published June 14, 1932. Class 6.

296,801. Furniture and Automobile Polish. Jlco Laboratories, Chicago. Filed March 9, 1932. Serial No. 324,966. Published June 7, 1932. Class 16.

296,888. Soap and Cleaning and Scouring Compound. S. Strunz & Son, Inc., Pittsburgh. Filed April 19, 1932. Serial No. 326,272. Published June 7, 1932. Class 4.

296,893. Soaps. Magnuson Products Corp., New York. Filed April 14, 1932. Serial No. 326,112. Published June 7, 1932. Class 4.

296,899. Shaving Cream. Domestic Toiletries, Inc., Cleveland. Filed April 9, 1932. Serial No. 325,942. Published June 7, 1932. Class 4.

296,909. Antiseptic. Peoples Drug Stores, Inc., Washington, D. C. Filed April 9, 1932. Serial No. 325,958. Published June 14, 1932. Class 6.

296,966 Insecticide. John Powell & Co., New York. Filed March 24, 1932. Serial No. 325,440. Published May 31, 1932. Class 6.

296,989. Floor and Furniture Wax and Polish. Best Products Co., Kansas City. Filed March 14, 1932. Serial No. 325,200. Published June 14, 1932. Class 16.

297,003. Copper Polish. Charles Burke & Sons, Detroit. Filed March 21, 1932. Serial No. 325,383. Published June 14, 1932. Class 4.

297,015. Antiseptic. Bio-Medical Research Laboratories, Inc., Brooklyn. Filed November 27, 1929. Serial No. 292,969. Published January 14, 1930. Class 6.

297,016. Antiseptic. Bio-Medical Research Laboratories, Inc., Brooklyn. Filed November 27, 1929. Serial No. 292,971. Published January 14, 1930. Class 6.

297,019. Automobile Polish. Steelcote Manufacturing Co., St. Louis. Filed August 16, 1929. Serial No. 288,624. Published June 14, 1932. Class 16.

297,024. Shampoo. Betty Jean Laboratories, Fort Wayne, Ind. Filed March 8, 1932. Serial No. 324,871. Published May 24, 1932. Class 6.

297,071. Tooth Paste. Bon Ami Co., New York. Filed March 28, 1932. Serial No. 325,559. Published May 24, 1932. Class 6.

Report Second Quarter Fat and Oil Data

The Department of Commerce reports that, according to Census returns, the factory production of fats and oils in United States during the three-month period ended June 30, 1932, was as follows: vegetable oils, 403,438,850 pounds; fish oils, 5,938,158 pounds; animal fats, 553,147,389 pounds; and greases, 80,923,082 pounds; a total of 1,043,447,479 pounds.

The following table gives data on a number of soap making oils.

Production, Consumption, and Stocks of Fats and Oils

Kind	Factory operations for the quarter ended June 30, 1932		Factory and warehouse stocks, June 30, '32
	Production (pounds)	Consumption (pounds)	(pounds)
Cottonseed, crude	224,152,123	302,429,350	49,993,932
Coconut, or copra, crude	62,357,667	124,120,098	178,229,072
Corn, crude	24,320,418	21,771,332	7,765,577
Soybean, crude	9,256,762	5,460,287	18,079,585
Olive, inedible	.....	1,386,676	1,469,201
Sulphur oil or olive foots	.....	8,478,142	13,211,776
Palm	.....	46,481,837	91,226,480
Menhaden	1,917,879	5,242,894	6,370,277
Whale	1,395,000	14,881,559	97,441,712
Lard	408,690,771	5,541,357	107,905,613
Tallow	142,260,759	171,926,266	194,353,257
White grease	15,985,646	12,912,458	12,595,140
Yellow grease	17,139,569	7,449,217	12,766,478
Brown grease	10,726,216	14,140,690	13,027,634
Lard compounds and other lard substitutes	221,006,177	76,521	23,526,750
Oleo oil	17,470,752	3,499,038	6,248,759
Lard oil	3,964,145	2,230,969	4,123,410
Tallow oil	1,158,092	1,758,286	1,515,559
Red oil	6,307,899	4,104,713	11,184,198
Stearic acid	4,221,321	2,024,931	3,781,727
Glycerin, crude 80% basis	35,451,411	34,001,567	20,200,388
Glycerin, dynamite	9,404,866	2,972,397	15,156,098
Glycerin, chemically pure	16,391,194	1,651,261	13,565,980
Cottonseed foots, 50% basis	54,732,418	53,294,444	77,209,902
Acidulated soap stock	15,816,478	11,622,361	27,628,185
Miscellaneous soap stock	443,954	609,404	391,510

—o—

Exports of laundry soap from United States in the month of June, 1932, were 2,017,851 lbs., valued at $103,486, as compared with 2,748,959 lbs., worth $172,525, in the same month last year. Totals for the first six months of 1932 were 10,906,220 lbs. and $577,447, as against 17,494,308 lbs. and $1,065,237 during the same period of 1931.

—o—

Westvaco Chlorine Products Corp., manufacturers of alkalies and chemicals, reported net profit of $176,578 for the six months ending June 30, last. This was equal to 35 cents per share after depreciation, taxes, and preferred dividends, and compares with $376,682 and $1.33 per share for the first half of 1931.

—o—

The newly created Cuban consumption taxes, levied on the gross weight, and collected at the customhouse of entry on imported soaps and at the factory in the case of domestic soaps, are as follows:—Soap in perfumed bars for bath or toilet, in perfumed powder or liquid form, in cakes for bath or toilet, wrapped or not, whether perfumed or not, and medicinal soaps and castile or marsella, $8.25 per 100 kilos; and ordinary laundry or scouring soap, in paste or liquid, cakes, bars, sheets or flake or in powder, and dye soaps, $1.55 per 100 kilos.

—o—

During the first five months of 1932, Japan produced 16,641 metric tons of caustic soda which represented 55 per cent of the plant capacity of that country.

New Patents

Conducted by

Lancaster, Allwine & Rommel

Registered Attorneys

PATENT AND TRADE-MARK CAUSES

815 15th St., N. W., Washington, D. C.

Complete copies of any patents or trade-mark registrations reported below may be obtained by sending 25c for each copy desired to Lancaster, Allwine and Rommel. Any inquiries relating to Patent or Trade-Mark Law will also be freely answered by these attorneys.

No. 1,865,948, Deodorant and Cleansing Powder, Patented July 5, 1932, by William Francis Nutt, Newburgh, N. Y. A perfumed cleaning powder and deodorant including a mixture of 80 parts of sodium bisulfate, a deodorizing perfume, and 16 parts of sodium sulfate for preventing the sodium bisulfate from liquefying or caking when the perfume is added.

—o—

No. 1,868,151, Process for Preparing Solid or Half-Solid Solutions of Alkaline Hypochlorites, patented July 19, 1932, by Peter Shestakoff, Paris, France. The process for preparing solid solutions of hypochlorite alkalis which consists in adding to the aqueous solution of alkalis, alkaline salts of saturated fatty acids, heating the mixture until the entire dissolution of the soap is obtained and then saturating it with chlorine.

—o—

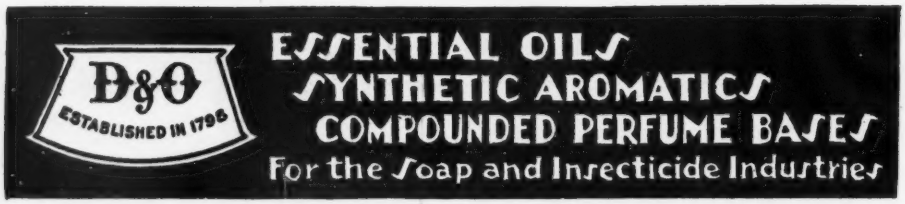
No. 1,868,838, Shaving Preparation, Patented July 26, 1932, by John McIntyre, Portobello, Scotland. An improved self-contained shaving preparation consisting of a mucilaginous, aqueous liquid composed of water containing those constituents of linseed which are soluble in boiling water, of such a consistency as to leave a thin liquid film on the face, and a small quantity of a free alkali selected from the class consisting of caustic soda, ammonia and mixtures thereof.

—o—

No. 1,868,862, Detergent Towel and Method of Making the Same, Patented July 26, 1932, by Edward W. Washburn, Washington, D. C. A detergent towel comprising toweling material slightly impregnated with a soap compound, the surfaces of the material being free of soap coating of any appreciable visibility and lather producing quantity, the proportions of soap to the toweling material being such that the toweling material possesses sufficient body and absorbent characteristics to dry as well as cleanse a moistened surface.

—o—

Production of China wood oil in Central China declined about 12 per cent in 1931 as compared with 1930, the drop being from 90,000 to 80,000 tons.



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Market Report on

ESSENTIAL OILS AND AROMATICS

(*As of September* 9, 1932)

NEW YORK.—Oils of domestic manufacture continued to feature the essential oil market this period, the only one of these affecting the soap maker being peppermint oil. The latter continued to advance in price, although it is stated that little buying has taken place at the higher figures. Users are still skeptical as to the reported small crop, and in view of the ample carryover stocks available, are not concerned over the possibility of a real shortage. Another oil to show strength this period was cananga, which was quoted substantially higher as a result of reduced stocks. There was no change in the spot market on anise oil, but cables were said to be higher and the market took on a somewhat firmer tone. Cassia oil was again lower this period as producers found it necessary to make further concessions in order to realize on their stocks.

Oil Anise

In the opinion of most dealers this oil, which has been declining steadily for over a year, has passed its lowest point. Cables were reported to be a cent a pound higher toward the close of the recent period, and the spot market also took on a firmer tone. No quotable change in current prices was made, however.

Oil Cananga

This oil is reported to be in rather reduced supply, as a result of which quotations have been advanced on both the crude and rectified oil. Crude is now quoted at $1.60 to $1.70, with rectified oil at $2.05 to $2.15.

Oil Cassia

Another cent was cut off the price of Cassia this period as a result of additional concessions by Chinese suppliers in late cables. Again the drop was caused by no particular development in the situation, being only a move to liquidate stocks.

Oil Peppermint

Peppermint oil continued to be the strongest feature of the essential oil market this period. Further advances were made by mid-western distillers who showed no tendency whatever to weaken. Local dealers, however, are not rushing in to acquire stocks at present prices, as they believe that the crop shortage may have been magnified and the rise been too abrupt. Little buying has taken place at the higher levels, according to all reports.

Spermaceti and sperm oil are saponified by treatment with concentrated lyes at temperatures in excess of 200 degrees C. This results in the conversion of the aliphatic, monovalent alcohols contained in the original material into alkali salts of fatty acids. The concentrated lye is added gradually to the raw material and in such amount that only a slight excess is present. Dr. Carl Stiepel. German Patent No. 524,366.

—o—

"Employees' Suggestion Systems" is the title of a report just published by the Policyholder Service Bureau of the Metropolitan Life Insurance Co., copies of which may be obtained by addressing the Service Bureau at 1 Madison Avenue, New York. The report discusses the methods used by representative industrial companies to obtain worthwhile suggestions from their personnel. It is based on a study of the systems of more than 100 organizations, and describes the outstanding features of these plans.

—o—

Exports of toilet or fancy soap from United States during June, 1932, totaled 208,465 lbs., worth $35,312, as compared with 433,306 lbs., valued at $96,306, during the same month last year. Exports for the first six months of 1932 were 2,107,329 lbs., valued at $338,335, as against 2,530,786 lbs., priced at $551,138, during the corresponding period of 1931.

—o—

Imports of castile soap into United States during July, 1932, totaled 189,464 lbs., worth $13,164, as compared with 240,191 lbs., worth $22,155, during the same month last year. Imports of toilet soap in July, 1932, were 29,404 lbs., worth $10,114, as compared to 81,575 lbs., worth $27,389, in the same month of 1931.

—o—

A group of Mississippi business leaders has recently presented to Governor Conner a plan for developing cut-over lands in the Southern part of the State by cooperative planting of tung trees. The plan involves erection of cooperatively owned crushing mills.

—o—

Four manufacturers of paper boxes and shipping cases have recently merged to form a corporation with $6,500,000 paid up capital. They are: Rockford Fiber Container Co., Rockford, Ill.; Quick Service Box Co., Chicago; Eddy Paper Corp., Three Rivers, Mich.; and Keickhefer Container Co., Milwaukee.

—o—

Exports of caustic soda from United States during June, 1932, totaled 9,119,587 lbs., worth $200,274. Exports of soda ash were 3,020,705 lbs., valued at $48,219.

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Say you saw it in SOAP!

Market Report on

SOAP AND DISINFECTANT CHEMICALS

(*As of September* 9, 1932)

NEW YORK.—Firmer tendencies were noted this period in the market for soap and disinfectant chemicals, with buyers and sellers alike looking for an increase in activity over the fall season. Naval stores showed considerable activity and substantially higher quotations were current on the various grades of gum rosin. Arrivals thus far this season have shown a sharp reduction from last year's totals and the total output for the season is sure to be well under the figure for last year. A firmer tone was also noted in glycerin, although prices are unchanged. The heavy chemical market has been sluggish in responding to the rise, but this period increased sales of alkalis were reported to the textile trade which is now in somewhat better shape.

Alkalis

Increased call for caustic soda was noted from the textile trade last period, and other alkalis also moved in satisfactory quantity considering the dull season. Producers are hopeful of a considerable expansion in sales with the beginning of the expected fall upturn in business.

Glycerin

Production during the first half of 1932 and producers' stocks on June 30 are shown in the following table in comparison with the same period of the previous year:—

Production	Pounds	
	1931	1932
Glycerin, crude	70,361,387	71,027,324
dynamite	21,099,829	18,105,160
chemically pure	37,438,713	33,270,286
Producers' Stocks	**Pounds**	
	1931	1932
Gylcerin, crude	13,183,235	20,200,388
dynamite	11,685,623	15,156,098
chemically pure	10,778,964	13,565,980

Insect Powder

Within the past week there has been a sharp advance in cost of new crop pyrethrum, due in some degree to higher exchange. Suppliers have not advanced current market quotations, however, the price of good quality flowers holding at about 18c to 20c lb. From present indications the new crop is normal in size and tests show the relative killing efficiency of new crop flowers to be high.

Naval Stores

Rosin quotations have advanced sharply over the last month, the gains ranging between 35c and 80c per barrel on various grades. The rise is principally due to reduced arrivals which indicate that total production for the year will represent a substantial reduction from last year's figures. Up to the middle of August receipts of gum rosin for the current season show a drop of 200,000 barrels as compared with the totals for a year ago and there is every prospect that arrivals will continue light. Soap makers have been rather active over the past month in replenishing their stocks of rosin while prices are still unusually low. The closing schedule this period follows: Gum rosin, Grade B, $3.60; H, $4.07; K, $4.40; N, $5.35, WG, $5.85; WW, $6.45; Wood $3.43 to $3.63.

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Oil and Fat Consumption

(*From Page* 31)

for the inedible grade and about 150 per cent on edible tallow during 1931. Last year's total for the inedible grade was not far to the rear of coconut oil which stood second of all oils and fats in relative importance from the standpoint of factory consumption. Speaking in comparative terms, the gap of 138 million pounds between inedible tallow and coconut oil in 1929 was closed to 26 million pounds during last year. Some 453½ million pounds, all but 1¾ millions being inedible, or 88 per cent of the total, went into soap in 1929. What do we find for last year? The answer is 82 per cent representing somewhat over 525 million pounds and including 1½ million pounds of edible. On the basis of inedible tallow alone, the percentage shows up even larger, i.e., 90 per cent in 1929 and 92½ per cent during last year. As for the remaining consumption of inedible tallow, 61½ million pounds or 12 per cent in 1929 and 42½ million pounds or 7½ per cent in 1932 is listed to "miscellaneous industries," chief among which are stearic acid pressers, manufacturers of lubricating compounds and in a lesser measure, concerns engaged in making leather dressing preparations. The only other channel of consumption meriting especial attention is the textile industry which, in 1929, accounted for 1,351,000 pounds or about 2½ per cent) included in the percentage mentioned above for "miscellaneous industries"). Last year, the consumption by this industry was not shown separately. Other factory use of inedible tallow is negligible.

The 1929 statement indicated that 90 per cent of the edible tallow was consumed in the manufacture of lard compounds, while 1¾ million pounds went to the soap kettle and "miscellaneous industries returned a con-

(*Turn to Page* 51)

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2. Metso has inhibiting effect which restrains corrosive action on the object cleaned.
3. Metso has better wetting power than other alkalies.
4. Metso is a good deflocculating agent, preventing dirt from redepositing on the object cleaned.
5. Metso emulsifies fat, oil and grease.
6. Metso rinses freely.
7. Metso is economical—half as much Metso is usually enough.

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TALLOW

Fatty Acids

Theobald Animal By-Products Refinery

KEARNY, N. J.

ESTABLISHED 1914

Market Report on

TALLOW, GREASES AND OILS

(*As of September* 9, 1932)

NEW YORK—For the third successive month prices of soapmaking oils, fats and greases continued to rise sharply, gains ranging from a fraction of a cent to over a cent a pound. The principal feature of the market was cottonseed oil, which on the basis of unfavorable crop reports, general revival of business interest and strength in other commodities and securities, advanced steadily all through the period. The only reactionary feature of the market was coconut oil which declined fractionally after the strength shown last month. Domestic fatty products such as corn oil, tallow and lard were all decidedly firmer. There seemed to be considerably more interest apparent among buyers, but most of them seemed to be merely following the path of the market rather than disposed to make commitments. Some were reported to be waiting for a reaction before taking care of their needs.

Coconut Oil

Failure of buyers to respond to the stimulus of higher quotations on coconut oil which went into effect last period stopped the advance in this oil during the period just closed. In fact a fractional reduction in prices came as a result of the slow demand. New York tanks are quoted at 5⅝c lb., with coast tanks at 3⅜c.

Corn Oil

Corn oil advanced in step with cottonseed oil this period, gaining almost a cent a pound. Both offerings and inquiries were light on the advance. The current market is 4⅜c lb. for mill tanks with 5½c quoted on barrels.

Cottonseed Oil

The skyrocketing price of cotton and the continuance of a bullish securities market sent cottonseed oil sharply higher in price this period. Crude is offered at 4⅛c lb. and PSY oil at 5c lb., each figure being approximately a cent above the figure for this point last month. Another bullish feature in the situation is the unfavorable tone which cotton crop reports are taking. Rains and weevil infestations are said to have caused serious crop damage in many localities, and unofficial estimates now place the size of the crop at only 11,900,000 bales.

Stearic Acid

Both the double and triple pressed grades were advanced half a cent a pound this period, quotations now being 8c to 8½c lb. and 10¾c to 11¼c lb., repectively. Stearine also advanced approximately a cent a pound, now being quoted at 6¾c to 7c lb.

Tallow

Tallow advanced substantially this period, with city extra quoted as high as 4c lb. at the close. The market exhibited a very firm tone with producers unwilling to increase offerings in spite of the higher offers.

—o—

Production of tung oil in Central China totaled 80,000 tons in 1931, a reduction of about 10,000 tons from the 1930 total.

—o—

Stocks of crude cottonseed oil on hand in United States as of July 31, 1932, totaled 29,433,629 lbs., as against 8,086,071 lbs. on the same date last year. Stocks of refined oil were 625,731,391 lbs. on July 31, 1932, as against 277,836,530 lbs. on July 31, 1931.

—o—

Oil and Fat Consumption

(*From Page* 49)

sumption of a million pounds. Almost 97 per cent or 69½ million pounds of the much increased consumption reported last year was converted into lard compounds, leaving 1½ million pounds to the soap industry and 400,000 pounds assigned as consumption in "miscellaneous industries."

Greases consisting in the main of brown beef, white and yellow hog, garbage and tankage greases constituted a recorded consumption of 227,612,000 pounds in 1929 and around 211 million pounds or 7 per cent less last year. In the former year, the soap industry took about two-thirds of the total; last year its requirements were cut to 61 per cent. Except for very small amounts used by the paint and printing ink industries, the balance of 72 million pounds in 1929 was listed to "miscellaneous industries" which last year increased its consumption to nearly 81 million pounds.

Much of the edible animal stearine and oleo oil produced is sold as such and not retained for further processing or utilization. Total factory consumption of these two packing house by-products in 1929 ran well ahead of last year. Of the 52¼ million pounds of edible animal stearine consumed in 1929, nearly 85 per cent went into lard compounds. Total consumption was 19 million pounds or approximately 40 per cent lighter in 1931. However, compound manufacturers used relatively the same percentage both years. Oleomargarine churners resorted to 6,135,000 pounds or a little less than 12 per cent in 1929 and 4,883,000 pounds or near to 15 per cent this past year. Around 1½ million

(*Turn to Page* 93)

COULD YOUR FILLERS DO THIS JOB? • • •

Quickly, accurately, cleanly, the wide variety of "Farmers Pride" products goes into an equally wide variety of containers with the help of Stokes & Smith Universal Fillers.

Changing from one container to another of different size or style is but a few minutes' work. And each time the auger feed of a Stokes & Smith Filler puts a measured or weighted portion of "Farmers Pride" merchandise into its container, there is a definite, measurable cash saving.

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SOAP PERFUMES

We offer you a full line of high class soap perfumes at reasonable cost, all of them having outstanding odor value. We invite you to ask us for samples, and to try them out in a proportion of 1 : 100. You will be amazed at the results obtained.

CHYPRE SAVON	**LAVENDER SAVON**
HELIANTHINE SAVON	**LILAC A SAVON**
ISYLA SAVON	**ORIGANOL SAVON**
JASMIN BASE SAVON	**TEA ROSE SAVON**

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THEATRE SPRAYS, LIQUID SOAPS, SHAVING CREAMS, DISINFECTANTS

POLAK'S FRUTAL WORKS, INC.

350 W. 31st St. **New York City**

CHICAGO BRANCH—16 South Peoria St.

CURRENT PRICE QUOTATIONS

As of September 9, 1932

Minimum Prices are for car lots and large quantities. Price range represents variation in quotations from different suppliers and for varying quantities.

Chemicals

Acetone, C. P., drums.....lb.	.10	.11
Acid, Boric, bbls., 99½%.....ton	95.00	100.00
Cresylic, 97% dk., drums.....gal.	.42	.43
97-99%, pale, drums.....gal.	.49	.53
Formic, 90%, tech.....lb.	.10½	.12
Oxalic, bbls.....lb.	.11	.11¼
Adeps Lanae, hydrous, bbls.....lb.	.14	.15
Anhydrous, bbls.....lb.	.15	.16
Alcohol, Ethyl, U. S. P., bbls.....gal.	2.45	2.59
Complete Denat., No. 5, drums., ex. gal.	.35½	.43½
Alum. potash lump.....lb.	.03	.03¼
Ammonia Water, 26°, drums, wks...lb.	.02½	.02¾
Ammonium Carbonate, tech., bbls...lb.	.08	.12½
Bleaching Powder, drums.....100 lb.	1.75	2.35
Borax, pd., cryst., bbls., kegs....ton	50.00	55.00
Carbon Tetrachloride, car lots.....lb.	—	.06¼
L. C. L.....lb.	.06½	.07
Caustic, see Soda Caustic, Potash Caustic		
China Clay, filler.....ton	10.00	25.00
Cresol, U. S. P., drums.....lb.	.10½	.11
Creosote Oil tanks.....gal.	.11½	.12½
Formaldehyde, bbls.....lb.	.06	.07
Fullers Earth.....ton	15.00	24.00
Glycerine, C. P., drums.....lb.	.10¼	.10½
Dynamite, drums .....lb.	.07½	.08½
Saponification, tanks .....lb.	.05	.05½
Soaps, Lye, tanks.....lb.	.04	.04⅛
Hexalin, drums .....lb.	—	.30
Kieselguhr, bags .....ton	—	35.00
Lanolin, see Adeps Lanae.		
Lime, live, bbls.....per bbl.	1.70	2.20
Mercury Bichloride, kegs.....lb.	.93	1.08
Naphthalene, ref. flakes, bbls.....lb.	.03¾	.05
Nitrobenzene (Myrbane) drums....lb.	.09½	.11
Paradichlorbenzene, bbls., kegs....lb.	.15	.23
Paraformaldehyde, kegs .....lb.	.38	.39
Petrolatum, bbls. (as to color).....lb.	.01⅞	.06¾
Phenol, (Carbolic Acid), drums....lb.	.14¼	.16
Pine Oil, bbls.....gal.	.61	.66
Potash, Caustic, drums.....lb.	.06⅛	.06⅜
Flake .....lb.	.07	.08
Potassium Bichromate, casks.....lb.	.08	08½
Pumice Stone, powd.....100 lb.	2.50	4.00
Rosins (600 lb. bbls. gross for net)—		
Grade B to H, basis 280 lbs.....bbl.	3.60	4.07
Grade K to N.....bbl.	4.40	5.35
Grade WG and WW.....bbl.	5.85	6.45
Wood .....bbl.	3.43	3.63
Rotten Stone, pwd. bbls.....lb.	.02½	.04½
Silica, Ref., floated.....ton	18.00	22.00
Soap, Mottled 40 lb. box.....lb.	—	.12
Olive Castile, bars, powder.....lb.	.12	.22
Powdered White, U. S. P.....lb.	.14	.16
Green, U. S. P.....lb.	.06½	.07½
Tallow Chips .....lb.	.07½	.08
Whale Oil, bbls.....lb.	.04	.04½
Soda Ash, contract, wks., bags, bbls. 100 lb.	1.12½	1.38
Car lots .....lb.	—	1.00
Soda Caustic, Cont., wks., sld...100 lb.	—	2.50
Flake .....lb.	—	2.90
Liquid, tanks .....lb.	—	2.15
Soda Sal., bbls.....100 lb.	1.05	1.15
Sodium Chloride (Salt).....ton	11.40	14.00
Sodium Fluoride, bbls.....lb.	.07½	.08½
Sodium Hydrosulphite, bbls.....lb.	.22	.26
Sodium Silicate, 40 deg., drum, 100 lb.	.75	.80
Drums, 60 deg. wks.....100 lb.	—	1.65
In tanks, 15c. less per hundred, wks.		
Tar Acid Oils, 15-25%.....gal.	.21	.25
Trisodium Phosphate, bags, bbls.....lb.	.03	.0390
Zinc Oxide, lead free.....lb.	.06	.06¼
Zinc Stearate, bbls.....lb.	.16	.18

Oils—Fats—Greases

Castor, No. 1, bbls.....lb.	.09¾	.10½
No. 3, bbls.....lb.	.09¼	.10
Coconut, tanks, N. Y.....lb.	.03⅝	.03¾
Tanks, Pacific Coast.....lb.	.03⅜	.03½
Tanks, Chicago .....lb.	.03⅞	.04
Cod, Newfoundland, bbls..... .gal.	.21	.26
Copra, bulk, Coast .....lb.	—	.02
Corn, tanks, mills.....lb.	.04⅜	.04½
Bbls., N. Y.....lb.	.05½	.05¾
Cottonseed, crude, tanks, mill.....lb.	.04⅛	.04¼
PSY .....lb.	—	.05
Degras, Amer., bbls.....lb.	.02¾	.03¾
English, bbls .....lb.	.03¾	.04
German, bbls .....lb.	.03	.03¼
Neutral, bbls. .....lb.	.06½	.08½
Greases, choice white, bbls., N. Y...lb.	.03	.04
Yellow .....lb.	.02¾	.02⅞
House .....lb.	.02¾	.02⅞
Lard, prime, steam, tierces.....lb.	.05½	.05¾
Compound tierces .....lb.	.06¾	.07¼
Lard Oil,		
Extra, bbls. .....lb.	—	.07¼
Extra, No. 1, bbls. .....lb.	—	.06¾
No. 2, bbls. .....lb.	—	.06¼
Linseed, raw, bbls., spot.....lb.	.0590	.0630
Tanks, raw .....lb.	—	.0530
Boiled, 5 bbls. lots.....lb.	—	.0710
Menhaden, Crude, tanks, Balt. ...gal.	—	.11½
Oleo Oil, No. 1, bbls., N. Y. .....lb.	—	.06⅛
No. 2, bbls., N. Y. .....lb.	—	.05⅜
Olive, denatured, bbls., N. Y.....gal.	.59	.60
Foots, bbls., N. Y. .....lb.	.04½	.04¾
Palm, Lagos, casks, spot.....lb.	.03½	.03¾
Shipments .....lb.	.03¼	.03⅜
Niger casks, spot .....lb.	—	.03⅛
Shipments .....lb.	—	.02¾
Palm Kernel, casks, denatured ....lb.	.04½	.04⅝
Tank cars, denatured .....lb.	—	.03¾
Peanut, domestic tanks .....lb.	.04¼	.04⅜
Red Oil, distilled, bbls. .....lb.	.06⅝	.07⅛
Saponified, bbls. .....lb.	.06⅝	.07⅛
Tanks .....lb.	—	.05¾
Soya Bean, domestic tanks, N. Y...lb.	--	.03½
Stearic Acid		
Double pressed .....lb.	.08	.08½
Triple pressed, bgs. .....lb.	.10¾	.11¼
Stearine, oleo, bbls. .....lb.	.06¾	.07
Tallow, special, f. o. b. plant .....lb.	.03⅝	.03¾
City, ex. loose, f. o. b. plant .....lb.	.03⅞	.04
Tallow, oils, acidless, tanks, N. Y. ..lb.	—	.06
Bbls., c/1, N. Y. .....lb.	—	.06½
Whale, nat. winter, bbls., N. Y. ..gal.	.51	53
Blchd., winter, bbls., N. Y. ....gal.	.54	.55
Extra blchd., bbls., N. Y. .....gal.	.57	.58

COLUMBIA BRAND

98% - 100%
CAUSTIC SODA
76% Na_2O
Solid – Flake
Ground – Liquid

99% - 100%
SODA ASH
58% Na_2O
Light–Dense
Feather

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431-451 St. Clair St., CHICAGO; Carew Tower, CINCINNATI; Santa Fe Terminal Bldg., DALLAS
BARBERTON, OHIO

CIN-MADE CONTAINERS

Makers of all kinds of insecticides, cleansers, soap powders, deodorants, paradiclorbenzine blocks and crystals, and many other similar products use CIN-MADE cylindrical fibre containers. From a wide variety of styles, sizes and colors there is a CIN-MADE container to meet your individual requirement. A large stock of all standard sizes is always carried in stock enabling us to offer 24 hours' service on rush orders. Prompt service on special sizes.

A FEW CIN-MADE STARS

1. Single holders for para blocks. **2.** Special single holder with diamond cut holes and duo finish. **3.** Multi-type container for para blocks. **4.** Revolving nickeloid sifter cover. **5.** Aluminum pour-out spout type. **6.** Non-neck style—semi-perforated screw cap. **7.** Tin slip-on cover—semi-perforated. Samples and prices on request.

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REPRESENTATIVES IN PRINCIPAL CITIES

Say you saw it in SOAP!

As of August 8, 1932

Essential Oils

Almond, Bitter, U. S. P.	lb.	$2.25	$2.50
Bitter, F. F. P. A.	lb	2.50	2.75
Sweet, cans	lb	.38	.40
Apricot, Kernel, cans	lb.	.24	.26
Anise, cans	lb.	—	—
U. S. P., cans	lb.	.30	.31
Bay, tins		1.60	1.90
Bergamot, coppers	lb.	1.90	2.00
Artificial	lb.	1.35	1.50
Birch Tar, rect., bot.	lb.	.45	.50
Crude, tins	lb.	.13	.14
Bois de Rose, Brazilian	lb	.92	1.00
Cayenne	lb	1.80	2.00
Cade, cans	lb.	.26	.27
Cajuput, native, tins	lb.	.52	.54
Calamus, bot.	lb.	2.75	3.00
Camphor, Sassy, drums	lb	.17	.19
White, drums	lb.	.13	.14
Cananga, native, tins	lb.	1.60	1.70
Rectified, tins	lb.	2.05	2.15
Caraway Seed	lb.	1.55	1.65
Cassia, Redistilled, U. S. P.	lb.	.89	.93
drums	lb.	—	.87
Cedar Leaf, tins	lb.	.70	.75
Cedar Wood, light, drums	lb.	.28	.30
Citronella, Java, drums	lb.	.49	.50
Citronella, Ceylon, drums	lb.	.32	.34
Cloves, U. S. P., cans	lb.	.90	1.00
Eucalyptus, Austl., U. S. P., cans	lb.	.25	.26
Fennel, U. S. P., tins	lb.	1.00	1.10
Geranium, African, cans	lb.	4.30	4.70
Bourbon, tins	lb.	4.40	4.80
Hemlock, tins	lb.	.75	.80
Lavender, U. S. P., tins	lb.	1.85	3.50
Spike, Spanish, cans	lb.	.55	.75
Lemon, Ital., U. S. P.		.80	1.25
Lemongrass, native, cans	lb.	.46	.47
Linaloe, Mex., cases	lb.	1.50	1.60
Neroli, Artificial	lb.	10.00	20.00
Nutmeg, U. S. P., tins	lb.	.95	1.00
Orange, Sweet, W. Ind., tins	lb.	1.20	1.25
Italian cop.	lb	1.20	1.90
Distilled	lb.	.75	.80
Origanum, cans, tech.	lb.	.25	.40
Patchouli	lb.	3.75	5.50
Pennyroyal, dom.	lb.	1.55	1.60
Imported	lb.	1.10	1.15
Peppermint, nat. cases	lb	1.70	1.80
Redis., U. S. P., cases	lb	1.90	2.05
Petit Grain, S. A., tins	lb	1.00	1.10
Pine Needle, Siberian	lb.	.60	.63
Rose, Natural	oz.	7.00	15.00
Artificial	oz.	2.00	2.75
Rosemary, U. S. P., drums	lb.	.36	.40
Tech., lb. tins	lb.	.30	.31
Sandalwood, E. Ind., U. S. P.	lb.	6.50	7.50
Sassafras, U. S. P.	lb	.80	.90
Artificial	lb.	.24	.26
Spearmint, U. S. P.	lb.	1.00	1.05
Thyme, red, U. S. P.	lb.	.50	.65
White, U. S. P.	lb.	.60	.70
Vetivert, Bourbon	lb.	4.50	5.00
Java	lb.	16.00	20.00
Ylang Ylang, Bourbon	lb.	5.15	6.50

Aromatic Chemicals

Acetophenone, C. P.	lb.	$2.00	$3.00
Amyl Cinnamic Aldehyde	lb.	3.50	4.25
Anethol	lb.	1.20	1.40
Benzaldehyde, tech.	lb.	.60	.65
U. S. P.	lb.	1.20	1.35
Benzyl, Acetate	lb	.60	.95
Alcohol	lb.	.80	1.30
Citral	lb.	2.10	2.40
Citronellal	lb.	1.75	2.50
Citronellol	lb.	2.50	3.50
Citronellyl Acetate	lb.	4.50	7.00
Coumarin	lb.	3.60	4.00
Cymene, drums	gal.	.90	1.25
Diphenyl oxide	lb.	1.10	1.20
Eucalyptol, U. S. P.	lb.	.60	.70
Eugenol, U. S. P.	lb.	3.00	4.00
Geraniol, Domestic	lb.	1.45	2.00
Imported	lb.	2.00	3.25
Geranyl Acetate	lb.	2.50	4.00
Heliotropin, dom.	lb.	2.00	2.50
Imported	lb.	2.50	4.00
Hydroxycitronellal	lb.	3.50	9.00
Indol, C. P.	oz.	2.50	5.00
Ionone	lb.	4.00	6.50
Iso-Eugenol	lb.	4.00	5.00
Linalool	lb.	1.95	3.25
Linalyl Acetate	lb.	2.40	3.15
Menthol	lb.	3.35	3.50
Methyl Acetophenone	lb.	2.50	3.00
Anthranilate	lb.	2.20	2.60
Paracresol	lb.	4.50	6.00
Salicylate, U. S. P.	lb.	.40	.45
Musk Ambrette	lb.	6.75	7.25
Ketone	lb.	6.00	7.50
Moskene	lb.	5.40	5.90
Xylene	lb.	2.75	3.00
Phenylacetaldehyde	lb.	4.75	7.25
Phenylacetic Acid, 1 lb., bot.	lb.	3.00	4.00
Phenylethyl Alcohol, 1 lb. bot.	lb.	4.25	4.50
Rhodinol	lb.	6.00	9.50
Safrol	lb.	.29	.31
Terpineol, C. P., 1,000 lb. drs.	lb.	.28	.30
Cans	lb.	.33	.34
Terpinyl Acetate, 25 lb. cans	lb.	.80	.95
Thymol, U. S. P.	lb.	1.50	1.75
Vanillin, U. S. P.	lb.	4.50	5.75
Yara Yara	lb.	1.60	3.00
Insect powder, bbls.	lb.	.20	.21
Concentrated Extract	gal.	1.50	1.70
Gums—			
Arabic, Amb. Sts.	lb.	.06	.06½
White, powdered	lb.	.10	.11
Karaya, powdered No. 1	lb.	.09½	.10
Tragacanth, Aleppo, No. 1	lb.	.80	.85
Sorts	lb.	.08	.10
Waxes—			
Bayberry, bgs.	lb.	.16	.18
Bees, white	lb.	.30	.38
African, bgs.	lb.	.15	.15½
Refined, yel.	lb.	.20	.30
Candelilla, bgs.	lb.	.11	.12
Carnauba, No. 1	lb.	.21	.23
No. 2, Yel.	lb.	.20	.22
No. 3, Chalky	lb.	.11½	.12
Japan, cases	lb.	.06¾	.07
Paraffin, ref. 125-130	lb.	.03⅝	.04⅛

If you are interested in preparing a *better* Latherless Shaving Cream at a low cost use

Contra-Foam

(A Pylam Product)

Contra-Foam makes a *better* Latherless Shaving Cream — positively neutral and non-irritating.

Better, since Contra-Foam creams require no preparatory facial wetting, nor removal with water after shaving. Moreover, they are genuinely soothing and extremely beneficial to tender or dry skins.

Write now for a sample of Contra-Foam and the simple formula for the production of Latherless Shaving Creams.

Pylam Products Co., Inc.

Mfg. Chemists Exporters Importers

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Cable Address "Pylamco"

Soap Color Makers Since 1917

TODAY!

..a Better Soap

..with "STANDARD"

a Better Silicate!

A Better Soap—because a *workable* Silicate is laboratory-built to your own specific formula.

A Better Silicate—because of gradings set by research, and thereafter held to strictest uniformity under rigidly controlled factory processes.

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4 FACTORIES 4 BETTER SERVICE

Say you saw it in SOAP!

American Soap Manufacture

(*From Page* 21)

Chevreul's researches led to the possibility of scientific accuracy rather than "rule of thumb" guesswork.

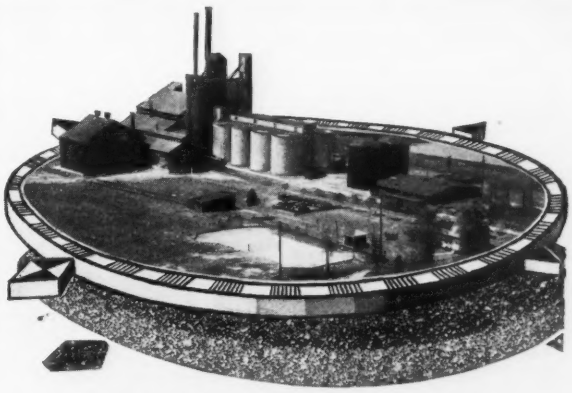
The new ideas did not very rapidly become popular, however. They finally spread to England, but James Muspratt, the first English manufacturer to use the LeBlanc process, is reputed to have given away tons of soda before he could convince soap makers of its value.[13] For some time after that the United States obtained her supply from England. In fact in 1867, Adolph Ott remarked, "It is only within the last few years that caustic soda has been offered in the market, and can be purchased either as a solid or as a liquid."[14] In a book published in 1869, Dussance states that "although the people of the United States labor under the disadvantage of having to pay high rates for the soda, the industry of soap and candle making is represented in this country by many respectable houses and involves a large capital."[15]

In spite of the fact that American manufacturers were producing nearly 50,000,000 pounds of soap for the home market,[16] including over a million dollars' worth for export, Campbell Morfit in 1847 soundly berated them for being so unprogressive. He declared that there should have been long since "a more liberal effort in furthering the improvement of the quality of soap, but as that proper spirit of emulation and enterprise, promotive of such desirable ends, has as a general thing been lacking among savonniers, the consumer has realized but little from the adoption of foreign improvements." He continued at some length to criticize his contemporaries, but finally admitted that "a select few have caught the inspiration of the times, and by their active intelligence have already contributed a Herculean assistance in resuscitating their profession, which, so lately as five years since, was, comparatively speaking, in a most deplorable slough of stagnancy." The "select few" mentioned are Hull, of New York, and Hyde, of Baltimore, I. D. Brown, and J. R. Graves, the successful competitor for the medals of the Franklin Institute in 1844 and 1845, E. Roussel, and Jules Haul. Apparently the leaven of "inspiration" worked well during the next few years, for in the new edition of Morfit's book, published years later, his criticisms did not appear.[17]

Certainly some improvements were being made during the nineteenth century. Jessie Oakley of Newburgh, N. Y., is said to have introduced soap in "cake form," one pound in weight, and wrapped, about 1830.[18] Milled toilet soaps are supposed to have been made in the United States for the first time by David S. Brown & Company about 1840.[19]

[13] Bosart, p. (2).
[14] Ott, p. 40.
[15] Dussance, p. 25.
[16] Bishop, v. 2, p. 426.
[17] Morfit, Introduction.
[18] Stanislaus and Meerbott, p. 8.
[19] *Soap*, v. 7, No. 12, p. 21-25. Dec., 1931.

(*To Be Continued*)



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SILICATES OF SODA

IN THE SIXTIES soap makers used to write longhand letters ordering a few tierces of "N" Brand. The ensuing three-quarters of a century has made its contribution to the art of soap making and the art of cleanliness. In that period P. Q. Co. has served the industry continuously by its research in detergency, by its location of plants.

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Here are illustrations of two of Newman's brand new all steel, steam jacketed SOAP CRUTCHERS. The CRUTCHER on the left can be used to crutch ANY kind of soap. The CRUTCHER on the right can also be used to crutch any kind of soap but is especially adapted for Crutching laundry soap. These are made in a complete range of sizes. Investigate our equipment and prices before placing your next crutcher order.

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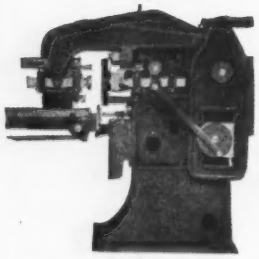
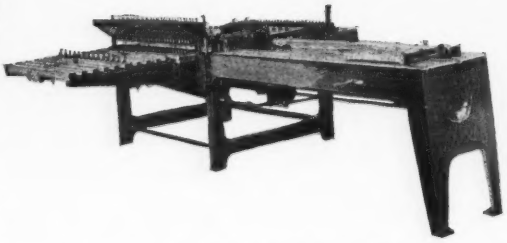
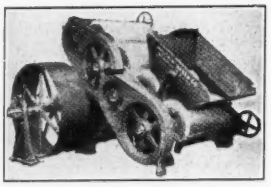


4 JONES AUTOMATIC combination laundry and toilet soap presses. All complete and in perfect condition.



2 Automatic Power Soap Cutting Tables.



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This 4-roll granite toilet soap mill is in A-1 shape. Latest and largest size rolls.

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- Dopp Steam Jacketed Crutchers, 1000, 1200, 1500 lbs. and 800 gals. capacity.
- Ralston Automatic Soap Presses.
- Scouring Soap Presses.
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- H-A 4 and 5 roll Steel Mills.
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USED EQUIPMENT

- Sperry Cast Iron Square Filter Presses, 10, 12, 18, 24, 30 and 36 inch.
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- Proctor & Schwartz large roll Soap Chip Dryers complete.

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- Proctor & Schwartz Bar Soap Dryers.
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Oil-Fat-Soap
PRODUCTION SECTION

A section of SOAP devoted to the technology of oils, fats, and soaps, published prior to Jan. 1, 1932, as a separate magazine under the title, *Oil & Fat Industries*.

Perfume as a Factor in Toilet Soap Rancidity

PERFUMED toilet soaps generally spoil because the soap itself is not properly made or because low grade raw materials are used in its manufacture. If examination shows that the soap is itself not to blame, then there is valid reason to believe that the cause of rancidity may be connected with the perfume. The large number of essential oils and aromatic chemicals used in making perfumed toilet soaps makes it somewhat difficult to trace the trouble to any specific compound or class of chemical compounds. The important point to bear in mind is that the blame should not immediately be placed on the perfume. A thorough investigation should first be made to exclude all other possibilities and if nothing else remains, then the possible action of the perfume should be looked into.

A German writer, E. J. Better, has suggested two possibilities of reciprocal reaction between soap and perfume which may cause rancidity. (*Chemiker Zeitung*, 1932, pages 549 to 550). The first is the reciprocal reaction between the so-called polar-active groups in soap and perfume. This diminishes the intensity of the odor, but it cannot explain the soap spoiling. The second is the intra-molecular, chemical rearrangement taking place between the soap or its constituents and the perfume. Both the perfune as well as the soap may be properly accused as being responsible for such reciprocal reactions. The chemical conversion between the free alkali of the soap and the carboxyl and hydroxy groups of certain acid-reacting perfumes is particularly important.

Fault may therefore be found especially with the properties of perfumes of aldehydic nature, which are manifested both in the superficial oxidation of the substance to acids which then neutralize the free alkali, and tend towards polymerization. Furthermore, the use of perfumes, which have definitely been proven unsuitable for soaps, must naturally likewise be held to blame, if the soap spoils, when all other indications fail.

Based on an entirely different hypothesis, an important connection has been developed. It is well known that the rancidity of soaps and fats is generally due to oxidation processes. The unsaponified fat in soap or the free fatty acids which are formed by the decomposition of the soap are oxidized by activated atmospheric oxygen. Oxidation products are formed which may have a partial acid reaction and which promote further decomposition of the soap. Thus a soap which has started to oxidize cannot resist further oxidation and becomes entirely rancid.

Recent experiments on the oxidation of fats have shown that all the natural fats and oils—and this also includes the unsaponified fat in soap—possess initial inherent resistance to the action of atmospheric oxygen. This is caused by the presence in these fats and oils of anti-oxidants, substances that are naturally found in them. The anti-oxidizing action is closely related to the hydroxyl groups of the sterines in the oils. The resistance of the oil to oxidizing influences is consequently decreased when the sterines are removed during refining. The sterines are oxidizable substances themselves and when present, they weaken the accelerating influence of other substances in the oils. Anti-oxidizing agents can also prevent the soap becoming rancid, because the first step in rancidity is the absorption of oxygen. On the other hand, the presence of oxidation-promoters in the fats and oils will substantially accelerate rancidity of the soap.

A large number of organic substances have been tested recently to determine their action on fats and oils, either to retard or to accelerate oxidation. A most interesting question is how do perfumes considered

as single chemical compounds behave when they are mixed with soaps as far as accelerating or retarding rancidity is concerned. The Japanese experimenters, Y. Tanaka and M. Nakamura (*Journal of the Society of Chemical Industry of Japan*, 1932, number 2, page 81b), have made a thorough investigation on 31 different organic compounds, which are almost always found in natural and artificial perfumes. These substances were examined with respect to their action on the auto-oxidation of linseed oil. The results are very interesting to soap manufacturers, as they explain many problems encountered in perfuming soaps with aromatic chemicals.

The experiments were carried out by dissolving equal molecular concentrations of the substances in like samples of linseed oil. The mixtures were then subjected to the action of sunlight and of atmospheric oxygen. All conditions were maintained constant during the experiments. After oxidation had proceeded for a definite period of time, the amount of oxygen absorbed was determined. The following tabulation gives the various compounds investigated and the nature of their catalytic action.

Compound	*Action*
Alpha-pinene	Slightly accelerating
Linalool	Slightly accelerating
Geraniol	Slightly accelerating
Nerol	Slightly accelerating
Laevo-borneol	Slightly accelerating
Citronellol	Inactive
Laevo-menthol	Inactive
Alpha-terpineol	Inactive
Benzyl alcohol	Slightly accelerating
Beta-phenylethyl alcohol	Slightly accelerating
Safrol	First slightly accelerating, then retarding
Isosafrol	Strongly accelerating
Citronellal	Slightly accelerating
Benzaldehyde	Strongly accelerating
Acetophenone	Strongly accelerating
Benzophenone	Strongly accelerating
Alpha-ionone	Strongly accelerating
Camphor	Inactive
Benzoic acid	Slightly accelerating
Salicylic acid	Slightly accelerating
Phenylacetic acid	Inactive
Diphenyl oxide	Slightly accelerating
Anethol	Accelerating
Thymol	Strongly retarding
Eugenol	Strongly retarding
Isoeugenol	Strongly retarding
Cis-isosafro isoeugenol	Strongly retarding
Yara-yara	Strongly accelerating
Vanillin	Strongly accelerating
Piperonal	Strongly accelerating

The following conclusions were reached. Aldehydes of the fatty series and of the terpene series act as relatively weak accelerants, while aromatic aldehydes have a very strong action. This affords a new explanation of the harmful action of aldehydic perfumes on soap. The aromatic acids, in which the carboxyl group is directly joined to the benzene ring, are slightly accelerating, while those, in which the carboxyl group is present in the side chain, are inactive. The injurious action of acid-reacting perfumes, manifested in the neutralization of the free alkali of the soap by the carboxylic acid group, may be accelerated in many instances because of the property of these acids to promote oxidation.

Aromatic ketones are strong oxidation promoters in contradistinction to aromatic terpene ketones. The aromatic ketones must not be used in perfuming soaps. Aromatic terpene hydrocarbons, aromatic unsaturated alcohols of the terpene series and aromatic alcohols appear to be either slightly accelerating or inactive. Esters of the monovalent phenols are strong oxidation promoters. On the other hand the derivatives of the multivalent phenols, which contain hydroxyl groups as well as ethyl-ether, propenyl and ethyl groups, are strong retarders of oxidation.

The results, obtained with the compounds of the eugenol group, contradict those obtained in practice. It has been claimed that soaps, perfumed with these aromatic chemicals, will discolor and suffer other injury. The results obtained with vanillin and piperonal, which were found to be strong accelerators of oxidation, agree well with practical experience.

While the aforedescribed experiments have furnished a new basis for explaining the spoiling of soap by perfume materials, nevertheless it must not be forgotten that the reciprocal reaction between soap and perfume may be manifested in various ways. In fact a number of simultaneous reactions may take place, and these reactions may promote or retard each other. Hence the state of the change of soap or the speed of the change depends at all times on the sum of the individual factors.

——o——

Resinous soaps are made with a saponifying mixture, consisting of a carbonated alkali and a bicarbonate alkali in addition to a volatile alkali. The saponification of the resin is carried out in two distinct and successive stages. The first stage is carried out with the mixture of carbonated alkali and bicarbonated alkali, which is used in a determined amount for saponifying only a part of the resin. The second stage of the saponification is effected with the volatile alkali, which is used in an amount limited to that necessary for acting on the portion of the mass of resin which has not been saponified in the first stage. United States Patent No. 1,853,807.

——o——

Animal and vegetable fats and oils are bleached by means of a combined bleaching process, consisting of the usual oxidizing bleach followed by a reducing bleach. The latter is effected with the aid of nascent hydrogen. The oxidizing bleach is carried out with two or more different oxidizing agents. I. G. Farbenindustrie A. G., Frankfurt-am-Main, Germany. German Patent No. 526,419.

The Use of Sulfonates in Liquid Soaps

THE manufacture of liquid soaps, originally a simple matter, has become potentially more complicated through the availability in recent years of a large number of emulsifying, wetting and lathering agents proposed for addition to the soap. These products have for their purpose the production of an emulsion which is more suitable than that ordinarily obtained by the old method of liquid soap manufacture. The results obtained with these emulsifiers are reported to have been quite satisfactory and have likewise enabled the soap manufacturers to use stocks ordinarily not suitable for liquid soaps.

According to a recent report by a Dr. Welwart of Vienna, experiments have shown that the alkali salts of aromatic or hydro-aromatic sulfonic acids can prevent the gelatinization of liquid soaps. The amount of sulfonic acid salt required for this purpose depends upon the character of the fat used as well as on the alkali and on the fatty acid content of the soap. Furthermore, alkylated aromatic or hydro-aromatic alkali sulfonates have the same action. Among these products may be mentioned the alkali naphthalenesulfonates, the alkali tetrahydronaphthalenesulfonates, the alkali diamylnaphthalenesulfonates and the diisopropylbutylnaphthalenesulfonates. Sulfonates of castor oil or carboxylic acid derivatives of castor oil act in the same way. Hence, castor oil soap solutions containing these derivatives are thin. They do not, however, act directly on the gelatinization of soaps made from other fats. Their lathering quality is insignificant just as the usual turkey red oils.

The gelatinizing capacity of soaps is affected both by hydrosulfonated phenols and cresols as well as by substituted dihydrodioxoles. Nevertheless, the addition of these fat solvents to liquid soaps is not advisable because they absorb too much fat from the skin when used regularly. Alkali salts of the condensation products of the higher fatty acids with sulfonating agents have, however, a very favorable action, particularly in that they leave the skin soft and smooth.

The advantageous use of sulfonated products in making liquid soaps depends not only on their effect on the skin, on the modified and the gelatinized condition of the soap, but also on other important conditions such as the lathering quality of the soap, the hardness of the water used in manufacture, and the resistance of the liquid soap to the action of lime and magnesia.

When the aforementioned sulfonates are used, the liquid soap need not contain free alkali. It may be neutral or acid, depending on the nature of the salt of the sulfonic acid used. The liberation of free alkali brought about by hydrolysis is largely counteracted, as such liquid soaps have proven extraordinarily mild cleansing agents. They contain a high proportion of saponified fatty acids; they are perfectly clear, possess good lathering quality and are effective cleansers.

The correction of a large excess of alkali in liquid soap by the addition of coconut oil during the boiling process has been considered advisable. This operation however consumes fuel or steam and requires considerable time. It is consequently much simpler to use a castor oil sulfonate containing as little sulfuric acid and hydrochloric acid as possible but which is, nevertheless, not neutral. Such a product is difficult to procure. However, a highly-concentrated, strongly-acid, turkey red oil which has a pH value of approximately 5.6 to 6.8 can be used instead. Only a few minutes are then required to correct the alkaline condition, while a few hours are required in the other process. The neutralization of a strongly alkaline liquid soap by the addition of castor oil fatty acid is just as simple. Aromatic or hydroaromatic sulfonic acids can also be used as neutralizing agents.

—o—

Standard Liquid Soap Concentrate

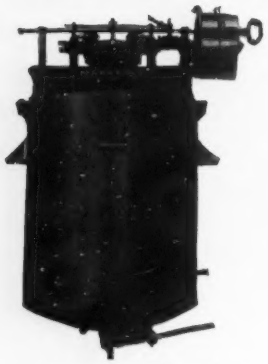
A standard for concentrated liquid soap was proposed to the National Association of Insecticide & Disinfectant Manufacturers at its last mid-year meeting in Chicago by Dudley J. Bachrach of Clifton Chemical Co., New York, chairman of the Committee on Liquid Soap Standards, in his semi-annual report. Through an error, publication of his recommendations was delayed. No official action on the proposed minimum standard was taken by the Association at its meeting as this is the first time a definite standard for the concentrated grade of liquid soap had been proposed. The standard, termed "proposed minimum standard for Liquid Soap, Concentrated Grade," follows:

"A reasonably clear solution of soap produced exclusively from refined coconut oil and caustic potash. No fatty acids or caustic soda should be used. The minimum concentration of anhydrous coconut oil soap should be 35 per cent. Glycerine must also be present to the amount of not less than 3½ per cent."

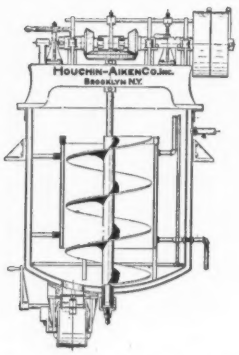
—o—

Greek consumption of toilet soap rose from 0.03 kilo per capita in 1920 to 0.07 kilo in 1930, according to a U. S. Department of Commerce report.

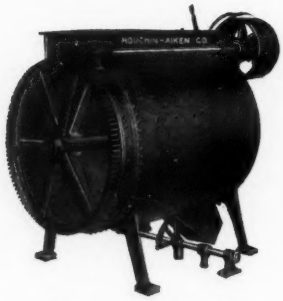
NEW and *USED*
HOUCHIN SOAP MACHINERY



Perfection Crutcher
Sliding Gate Valve



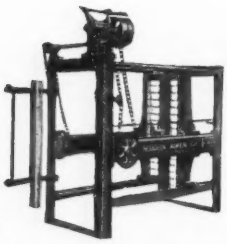
Perfection Crutcher Cross
Section View Plunger
Type Valve



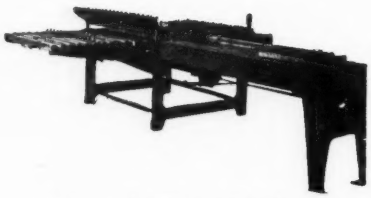
Horizontal Crutcher

Empire State
Press

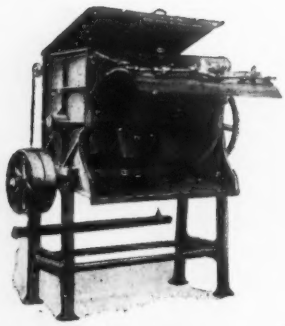
Standard
Soap Frame



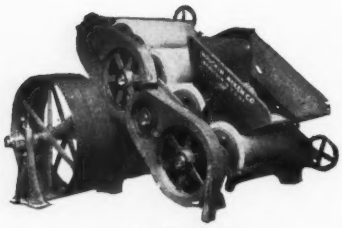
Automatic Power
Slabber



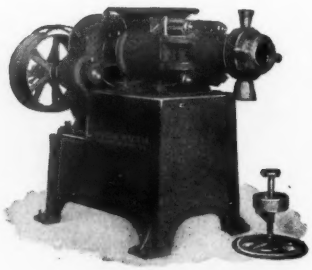
Automatic Power Cutting
Table



Ideal Amalgamator



4-Roll Mill
Mills built with 3 to 12 Chilled
Iron or Granite Rolls



Spur Gear 10″ Screw Plodder
Plodders furnished with 2½″
to 12″ screws.

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ON PRODUCTS AND PROCESSES

The presence of highly unsaturated fatty acids in fats used for making soap is undesirable It is however possible to overcome this difficulty by heating certain oils and fats of this type to a high temperature. The highly unsaturated fatty acids are thereby polymerized and the iodine value is reduced to that of oleic acid. Better soaps are then obtained. Japanese experimenters have polymerized soya bean oil by heating to 300 degrees C in a current of carbon dioxide. The decrease in iodine value in 5 hours was from 128 to 95. The molecular weight, relative viscosity, specific gravity and acid value all increased and the fatty acids no longer gave hexabromide and tetra-bromide derivatives. The soaps made from the polymerized soya bean oil are more stable than those made from the untreated oil. Stiepel. *Chemische Umschau*, 1932, page 102.

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Unsulfonated constituents are removed from sulfonated fatty oils by mixing the crude, washed sulfonated oil with water and a water-insoluble, sulfonatable oil, preferably the same oil as that originally sulfonated. The aqueous concentrate of the sulfonated oil is separated and salted out, etc. The oil layer is sulfonated further and processed in the usual manner. W. Seltzer. British Patent No. 370,022.

—o—

Various tallow-coconut oil soaps were salted out to determine the neutralization values of neat soap and niger fatty acids. With coarse salting-out, the neutralization value of neat soap fatty acids is less than that of the original soap fatty acids, and that of the niger fatty acids is higher than that of the original soap fatty acids. When the salting-out is finer, then the neutralization value of the niger fatty acids decreases rapidly while the neutralization value of the neat soap fatty acids decreases slowly. Yasota Kawakami. *Journal of the Society of Chemical Industry of Japan*, volume 35, pages 94 to 96, 1932.

—o—

Unsaponifiable matter in fish and marine animal oils is determined by a modified method. The ether extract is washed with half normal solution of sodium hydroxide to remove any dissolved fatty acids. The unsaponifiable matter is dissolved in warm neutral ethyl alcohol and titrated with tenth normal solution of sodium hydroxide to correct for fatty acids. E. R. Bolton and K. A. Williams, *Analyst*, 1932, volume 57, pages 25-27.

—o—

Potato starch is used to improve soft soap. The filled soap contains 7 parts of the starch to 43 parts of soap. It is also mixed with 50 parts of ground alkali hydroxide. An effective cleanser and dispersing agent is obtained. A. Jacobi A. G. French Patent No. 717,298.

—o—

Sodium silicate is detected in detergents by the following simple method. One gram of the sample is dissolved in water; the solution slightly acidified with HCl and the fatty acids separated by filtration. The filtrate is then highly concentrated in a small crucible, after which it is cooled. The addition to the filtrate at this stage of about 10 cc. of a 10 per cent solution of ammonium molybdate gives a yellow color due to formation of a complex acid. An intense blue color is then obtained by the addition of a few cc. of a strongly alkaline solution of sodium stannate. J. J. J. Dingemans, *Chem. Weekblad*, volume 14, 229.

—o—

Oil from press residues is detected as an adulterant of pure olive oil by testing the latter for resins. This may be done by emulsifying with 0.2 volume of ethyl alcohol saturated with hydrochloric acid and heating. The oil darkens perceptibly with 10 per cent adulteration. The oil may also be tested by heating, extracting abietic acid free from fatty acids and testing with sulfuric acid which gives a violet color. A. J. Ondovilla. *Anal. Fis. Quim*, 1932, volume 30, pages 145 to 147.

—o—

In esterifying fatty acids, and also mixtures of fatty acids and glycerides, either an excess of an alcohol (glycerin) or an excess of a fatty acid may be used. In the first case, triglycerides are not formed and the excess glycerin is hard to separate. In the second case fractionation of the fatty acids takes place, and those more difficult to react upon remain behind in uncombined state. These difficulties are avoided, when the process is first carried out with a small excess of glycerin and when this excess is thereafter removed by esterification with an excess of freshly added fatty acid. The residual fatty acid can then be easily removed by steam distillation. I. G. Farbenindustrie A. G., Frankfurt-am-Main, Germany. German Patent No. 551.868.

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Vegetable and animal oils are purified by removing the sulfur compounds with the sludge by heating the oils at 150 to 250 C with small amounts (for example 10 per cent) of salts or soaps of lead, copper or nickel, which are soluble in water or in the oil. It is advantageous to precipitate the metallic salts as hydroxides within the oil by the addition of solutions of sodium carbonate

or of reducing agents such as sodium bisulfite at below 100 to 105 C. I. G. Farbenindustrie A. G., Frankfurt-am-Main, Germany. British Patent No. 362,954.

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About 8,800 grams of crude sulfate soap, containing 3,100 grams of water, were heated to 396 degrees C in a forty liter rotary autoclave at a pressure of 170 atmospheres, then to 465 degrees C, then exhausted. The result is an aqueous solution weighing 2,955 grams, an oil weighing 2,715 grams, uncondensable losses 1,162 grams, residue 1,625 grams, loss 343 grams. The aqueous solution contained 4.5 grams of acid as acetic acid. The oil distilled at 40 to 150 degrees C 17.6, 150-200 degrees C 27.4, 250-270 degrees C 45.2, residue 6.2, loss 3.6. Extraction of the autoclave residue gave chloroform soluble 197, sodium carbonate 850, sodium sulfate 23, water-insoluble 544. Based on the liquid rosin in the soap, the oil yield was 60 per cent with a heating value of 10,300 calories. H. Bergstroem, *Iva*, 1932, 66-7. C.A., 1932, 3690.

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Recovering Glycerides From Soapstock

A current of steam is directed against a current of soapstock so that the direction of flow of the latter is changed. This is the principle of the new process that has been developed for the removal of neutral fats and oils in soapstock. The free fatty acids in fats and oils are commonly removed therefrom by neutralization with alkali or the like. The soapstock always contains glycerides and it becomes necessary to remove these glycerides which vary in proportion according to conditions, and average about one-third of the weight of the mass of soap. Three common processes have been used up to the present time for this purpose, first, salting out; second, processing with suitable solvents; and third, centrifuging. These methods possess disadvantages which have now been overcome by a reported new process.

The action of the current of steam on the current of soapstock results in sharp separation of the ingredients, namely, the glycerides, the soap and the soap water. Soapstock and steam may be brought together advantageously in a state of fine subdivision, by atomizing both the soapstock and the steam through a nozzle into a tank, with the result that the atomized soapstock contacts in all parts with the atomized steam. This action may also be effected by directing the current of soapstock, diverted by the current of steam, against an impact plate. The flow of soapstock is thereby broken up and it can then be intimately mixed with the steam. The pressure under which the soapstock and the steam are sprayed from the nozzles depends on the nature of the former and on the proportions of the two.

Thus one hundred kilograms of a soapstock which has been obtained by the de-acidification of a vegetable oil is treated by this process. Such an oil may contain for example in the crude state half to ten per cent fatty acids. There are 17.6 kilograms of neutral oil in the one hundred kilograms of soapstock and the remainder consists of soap, water and impurities. The soapstock is sprayed through the four nozzles at a pressure of approximately 0.25 atmosphere and contacted with a current of steam under a pressure of approximately 1.1 atmospheres. The yield obtained is about 15.9 kilograms of glycerides. Karl Jurke. German Patent No. 544,712.

—o—

Non-Gelatinizing Liquid Soaps

The addition of potassium acetate and potassium lactate prevents the gelatinization of liquid potash soaps made from tallow, palm oil or mixtures, and at the same time the discoloration of the soap which takes place, when ammonium thiosulfate is added is avoided. Potassium acetate and potassium lactate may be added in solid form or in solution. Alkaline-reacting potassium compounds may also be mixed with the soap and then the required amount of acetic acid or lactic acid may be added. The soaps made in this way do not require the addition of glycerin, alcohol, sugar or potash and remain thinly viscous down to a temperature of minus 8 degrees C. They are perfectly clear and lather well. They can be kept for a long time and do not thicken. At minus 3 degrees C they become slightly turbid but still flow easily from the soap dispenser. They become clear again at a temperature of plus 3 degrees C. They are not sticky and are economical to manufacture.

One example of making these soaps is as follows. Eight kilograms of coconut oil, 2 kilograms of tallow and 1.3 kilograms of olein (oleic acid) are saponified by the half-boiled process with 7.2 kilograms of caustic potash lye (40 degrees Be.) with the addition of 15 liters of water. Shortly after saponification is completed, 3.2 kilograms of a 50 per cent solution of potassium acetate are added. The soap is then allowed to cool. It is filtered to remove impurities. In other examples coconut oil and tallow fatty acids are saponified. Castor oil fatty acids and highly sulfonated turkey red oil are also used as raw materials in this process.—Henkel & Cie. G.m.b.H., Duesseldorf, Germany. German Patent No. 541,235.

—o—

Chemical Encyclopoedia

The fifth edition of this excellent reference book by Kingzett has appeared. It is of course a difficult task to produce a chemical encyclopoedia in a single volume of 1,000 odd pages. Some of the items receive considerable discussion and full information is given, but others are of necessity dismissed with very few words. Perhaps the most valuable part of the work lies in the bibliographical references. In the last analysis the book is not meant as a reference work for detailed data on chemicals and chemical subjects, but rather as an abridged chemical dictionary. It is a valuable addition to any chemical library. Written by C. T. Kingzett and published by D. Van Nostrand Co., New York.

Bleaching Sulfur Olive Oils

Sulfurized olive oils are frequently too highly colored to be used directly for some soap making. To decolorize the oils, the dichromate and the hypochlorite methods are used. The latter is the more economical of the two, but it has the disadvantage of chlorinating the oil. This results in the formation of undesirable oxy-acids in the soap and a bad odor as well. The use of potassium chlorate is attended by the same disadvantages. Benzoyl chloride is very satisfactory for this purpose, and its higher price is counter-balanced by a smaller consumption. Only 100 to 200 grams of benzoyl chloride are required for every 100 kilograms of oil. Bleached sulfurized oils rarely revert to the color of natural oil, while soaps produced are harder. A lower yield is obtained from the hypochlorite bleached oil. Belsunce, *Bulletin Matieres Grasses*, 1932, page 153.

—o—

Fat splitting agents are made from octadecenylamine or octadecanolamine which are sulfonated. These products may be used alone as fat splitters or dispersing agents or in association with aromatic sulfonic acids or their salts, sulfonated oils, soaps, organic solvents, etc. H. T. Boehme A. G., Berlin, Germany. British Patent No. 353.232.

—o—

Soap Builders

(*From Page* 27)

alkaline salt giving a high concentration of the sodium ion.

Of the salts, sodium metasilicate causes the greatest lowering when added to soap in the presence of free fatty acid. As these conditions represent a logical parallel to those under which a builder is used commercially, such tests should form one basis of comparison of alkaline salts for laundry use. Under these conditions sodium carbonate is second to sodium metasilicate, although in the absence of soap it shows greater lowering of interfacial tension than the metasilicate.

Sodium Orthosilicate

IN the determination of initial and available alkalinity of these materials, sodium orthosilicate was later introduced into the series as a silicate having a higher ratio of sodium oxide to silicon dioxide than the metasilicate, and therefore likely to be even more satisfactory as a soap builder so far as degree of alkalinity was concerned. The pH value and titration curve of sodium orthosilicate confirmed this supposition. The orthosilicate was therefore similarly introduced into this series of interfacial tension determinations. The values for a 0.033 per cent solution of this salt (both alone and added to a 0.1 per cent soap solution) against benzene, benzene and 0.1 per cent free fatty acid, and the various oil mixtures are shown in Table VI, in comparison with similar results for sodium metasilicate. In all cases the interfacial tension measurements for sodium orthosilicate are lower, corresponding to its greater alkalinity.

TABLE VI. COMPARATIVE INTERFACIAL TENSIONS OF 0.033 PER CENT SOLUTIONS OF SODIUM ORTHOSILICATE AND SODIUM METASILICATE, ALONE AND ADDED TO 0.1 PER CENT SOAP SOLUTION[a]

	Interfacial Tension Against:						
	Benzene	Benzene + 0.1% F.F.A.[b]	Oil I	Oil II	Oil VI	Oil VII	Oil VIII
	Dynes per centimeter						
Sodium orthosilicate	28.86	6.81	<1.0	<1.0	<1.0	3.70	4.24
Sodium metasilicate	29.89	10.60	<1.0	3.20	2.15	6.41	6.71
Sodium orthosilicate and soap	8.01	4.29	<1.0	<1.0	<1.0	<1.0	<1.0
Sodium metasilicate and soap	9.51	6.54	<1.0	<1.0	<1.0	1.80	1.96

[a] With Dimmig Stalagmometer.
[b] Free fatty acid.

Sodium orthosilicate has recently been prepared in crystalline form (7). If it becomes available commercially at a price within the range of other soap builders, these interfacial tension data support the conclusion previously indicated by data on its alkalinity in solution that, of the series studied, this salt would be superior as a soap builder.

Effect of Partial Neutralization

ONE would predict that the interfacial tension would increase as the builder was progressively neutralized and would give approximately the same value when completely neutralized as is given by sodium chloride, if it did not react with soap present.

In Table VII are given such results for sodium metasilicate and sodium carbonate, with correlating data needed for comparison.

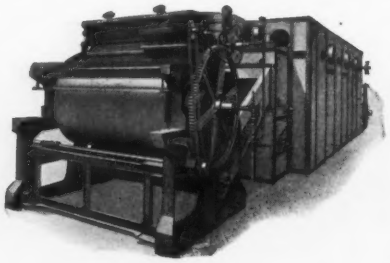
TABLE VII. INTERFACIAL TENSION OF PARTIALLY NEUTRALIZED SOLUTIONS AGAINST OIL II[a]

Salt	Degree of Neutralization 0%	25%	50%	75%	100%
	Dynes per centimeter				
0.033% sodium metasilicate	3.20 (0.0_32)[b]	7.06 (0.0_325)	8.36 (0.0_48)	10.69 (0.0_41)	17.31 (0.0_51)
0.033% sodium carbonate	2.32 (0.0_35)	5.09 (0.0_32)	6.27 (0.0_456)	8.46 (0.0_41)	16.32 (0.0_51)
0.033% sodium chloride	.....	.....	.....	.....	15.80
0.1% sodium oleate	5.23 (0.0_516)	.....	.....	.....	(0.0_516)
0.033% sodium metasilicate and 0.1% sodium oleate	<1.0	2.73	3.93	6.27	7.82
0.033% sodium carbonate and 0.1% sodium oleate	<1.0	2.35	3.50	5.47	7.57
0.033% sodium chloride and 0.1% sodium oleate	.....	.....	.....	.....	3.32
Water	.....	.....	.....	.....	19.65

[a] With Dimmig pipet.
[b] Figures in parentheses are COH values.

With the builders alone there is a rise in interfacial tension and then a lag as neutralization proceeds. When completely neutralized, the values are intermediate between those for the neutral salt, sodium chloride, and for water.

When builder is present with the soap, the results are better than those for soap alone until over 50 per cent neutralization has occurred. The interfacial tension then rises since the partially neutralized builder is below the neutral point for soap and therefore lowers its efficiency as shown by the value when 75 per cent neutralized. When 100 per cent neutralized, the interfacial tensions of 7.82γ and 7.57γ approximate that of 7.50γ for borax and soap against this oil. This again demonstrates the



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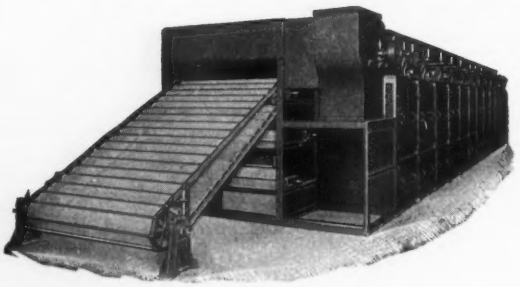

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detrimental action of a builder below the neutral point of soap, pH 10.2. Sodium oleate with sodium chloride is much superior to sodium oleate with the acidified alkaline buffers.

This series illustrates the function of the builder in protecting the soap from acidity of the soil. Values for C_{OH} of the solutions without soap (the only ones available) are inserted to show that the correlation is only a general one, and that other factors than C_{OH} enter in. At least one such factor is the effect of sodium ion on micelle formation.

Expression of Value of Soap Builder

COMPARATIVE values of soap builders are often expressed numerically in terms of the sodium oxide content. Such an expression is of little or no value. Comparison of the figures for sodium carbonate and modified soda show this most readily. The small differences in sodium oxide content are certainly not directly comparable to the large differences in their lowering of interfacial tension. Even sodium chloride, a nonalkaline salt, can be expressed in analytical terms for comparison as having a high sodium oxide content.

An important factor is estimation of the level below which sodium oxide is relatively ineffective. As sodium ion it is effective at any pH level within reason. The corresponding hydroxyl-ion concentration is more important and more effective in its use as a soap builder. Either pH 8.0 or pH 10.2 can be selected as a satisfactory level of comparison. Both are useful. In general the latter is much preferable. Neither is perfect.

In Table VIII are given such values in usual terms and in terms of sodium oxide above pH 8.0 and above 10.2. The clearer expression of the last two, particularly of the final one, is evident.

TABLE VIII. COMPARATIVE SODIUM OXIDE CONTENTS ABOVE DIFFERENT pH LEVELS CALCULATED FROM 0.66 PER CENT SOLUTION

SALT	TOTAL Na_2O %	Na_2O ABOVE pH 8.0 %	Na_2O ABOVE pH 10.2 %
Sodium hydroxide	77.5	77.5	75.2
Sodium metasilicate	29.6	28.2	17.8
Trisodium phosphate	26.9[a]	9.4	8.9
Sodium carbonate	58.5	29.1	9.4
Modified soda	50.1	17.4	0
Borax	29.6	17.4	0
Sodium chloride	53.0	0	0

[a] Theoretical, 24.3.

Proposed Comparative Method

BENZENE alone is not a suitable standard for comparative interfacial tension measurements because the factor of reaction between the builder and fatty acid at the interface is absent. There is always a question as to the accuracy of duplication of oil mixtures in which refined saponifiable oils are used. The necessary factors can be measured against benzene to which a known amount of refined oleic acid has been added. The series reported here against this mixture are not complete because many builders had been eliminated experimentally before its use was adopted.

In the absence of a better method it is recommended that for comparative measurement of the effect on interfacial tension of soap or other alkaline detergents, alone or in combination, the following method be used:

> Determine the drop number at a standard temperature with benzene containing 0.1 per cent free fatty acid against a large excess of the detergent solution. For such determination use the Dimmig pipet discharging at two drops per minute. The desirable temperature is 40° C. unless stearates are present, in which case 50° or 60° C. should be adopted. Calculate the drop number to interfacial tension in dynes per centimeter by the law of Tate without correction for deformation of the drop.

No data are available at present to show the duplicability of results between different laboratories. Duplicates at different times in the same laboratory have been consistently obtained.

Conclusion

OF themselves, sodium hydroxide, alkaline salts, and sodium chloride do not possess the detergent property of lowering the interfacial tension of water against pure benzene. When added to soap solutions, they lower the interfacial tension against pure benzene. With or without added soap all except sodium chloride substantially lower the interfacial tension against a nonaqueous mixture containing free fatty acid.

The factors involved are, in their order of decreasing importance: reaction of the alkali or alkaline salt with fatty acid in the dirt to form soap, repression of the hydrolysis of the soap by the hydroxyl ion (presumably to form micellar soap), and repression of the ionization of soap by the sodium ion (presumably to form micellar soap).

Of the series studied, sodium hydroxide causes the greatest lowering of interfacial tension when added to soap. Of the alkaline salts studied, the effect of sodium orthosilicate is greatest. Of the salts at present commercially available, sodium metasilicate has the greatest value on the basis of its effect on interfacial tension.

Acknowledgment

These results are published by permission of the Provident Chemical Works, a subsidiary of the Swann Corporation. The laboratory work was largely carried out by Elbert L. Jung and prepared for publication by Beatrice F. Grey.

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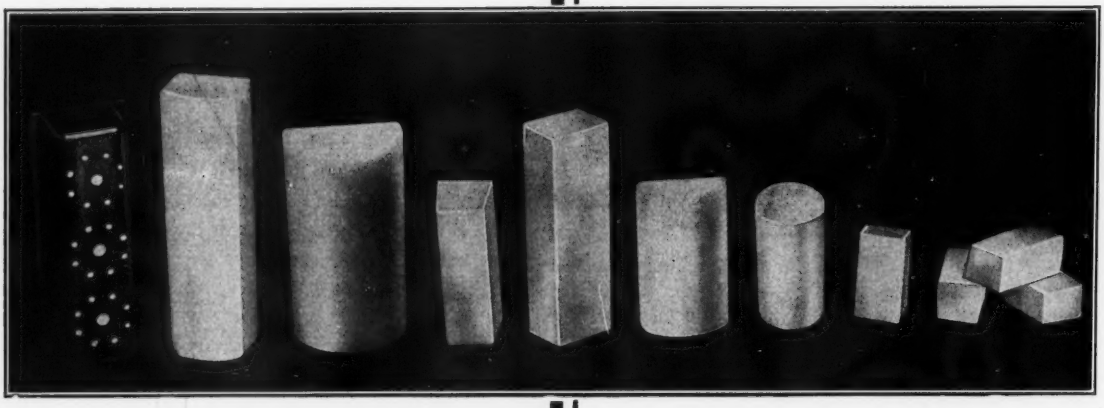

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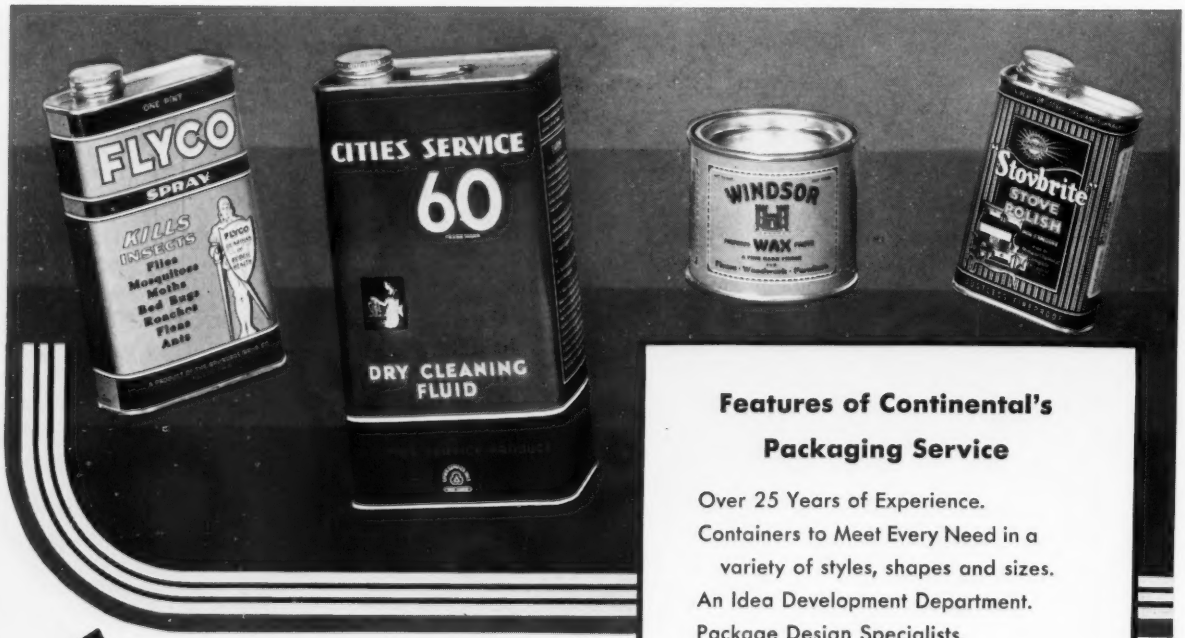

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* Patents pending covering the use of ethylene dichloride in this process.

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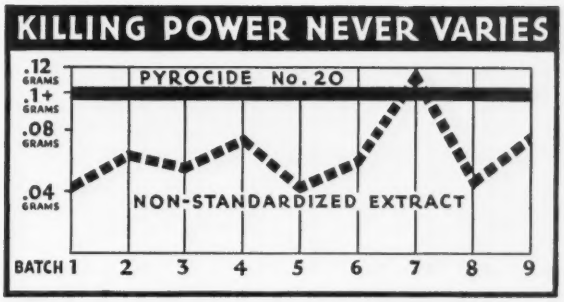

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Cedar No. 11	2.00	Lilac No. 3	2.50
Cedar No. 12	1.00	Lilac No. 4	1.10
Jasmin No. 11	2.50	Lilacine No. 11	1.10
Jasmin No. 12	1.50	Vanilla Bouquet for Spray	3.00
Lavender No. 135	1.00	Bouquet No. 118	1.50
New Mown Hay No. 11	3.75	Bouquet No. 11	3.00
New Mown Hay No. 12	1.50	Bouquet No. 12	2.00
New Mown Hay No. 13	2.00	Spray Odor No. 195	4.80
Oriental	1.50	Spray Odor No. 353	4.50
Narcissus	2.25	Spray Odor No. 457	3.75
Violet No. 11	3.00	Spray Odor No. 276	3.00
Violet No. 12	1.75	Spray Odor No. 259	2.00
Mint No. 11	1.50	Spray Odor No. 11	5.50
Mint No. 12	1.00	Spray Odor No. 12	5.00
Honeysuckle No. 11	3.25	Spray Odor D. No. 5	5.25
Honeysuckle No. 12	3.00	Spray Odor No. 23	4.50
Rose No. 11	2.25	Tuberose	4.25

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Amber	Bouquet—many bouquets to choose from, state type wanted.	
Blue		
Chypre green	Cedar	Orange
Light green	Hay	Oriental
Rose	Jasmin	Peppermint
Violet	Lilac	Pine
Yellow	Lily	Rose
	Narcissus	Violet

Grade A—any of the above odors with or without color $2.50 lb.

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Whether your disinfectant requirements are large or small, or whether the coefficient is two or twenty or any intermediate strength, let us figure with you. Samples will be submitted for your inspection, and we will be glad to give you the benefit of our many years of experience as specialists in this line.

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INSECTICIDE AND DISINFECTANT SECTION

A Department of SOAP

SOAP is official publication of *The National Assn. of Insecticide and Disinfectant Manufacturers.*

As Per Sample?

A SAMPLE of disinfectant, insecticide, liquid soap, or what not means nothing in itself. Only when the goods as delivered are equal to the sample, can the buyer be sure that he is getting that for which he is paying. The trick of submitting especially prepared samples showing high quality, and subsequently delivering merchandise of inferior quality which does not meet the samples, is as old as history. The fact that it is still being done makes the subject a pertinent one for the buyer of today, whether it be in raw material or finished product.

There are buyers who go to extremes in trying to assure themselves of the quality of the materials which they buy, and then proceed to ignore the most important feature of all, a careful comparison of deliveries with samples. What if the sample contains 20 per cent anhydrous soap and the goods as delivered contain twelve? Or if an insecticide sample shows a kill of 65 and the material as delivered shows 35? Or a disinfectant shows a coefficient of six by sample and three on a test of shipment?

We do not mean to imply that such practice is widespread, but we do know that there is enough of it engaged in that good horse sense calls for testing — and by that we mean recognized scientific testing and not casual eye examination — of both samples and shipments. In today's market, where we see and hear of prices low enough in themselves to arouse suspicion, protection against trickery is more essential than ever.

—o—

Disinfectant Outlets

ACCORDING to the new Sanitary Code of the Health Department of New York State, all swimming pools must hereafter be equipped with a footbath for use by the swimmers before and after using the pool. The footbath must contain fungus-destroying solutions. The object apparently is to guard against the spread of foot diseases such as the widely advertised "athlete's foot."

Here is a definite example of the compulsory use of disinfectants which should represent, if nothing else, a step in their wider consumption in new fields. There must be a hundred other similar prospective uses for disinfectants which should be compulsory as a means of protecting the public health. Innumerable summer camps and their manifold sanitary problems come to mind as other potential disinfectant consumers inasmuch as they are now also regulated more stringently by the same health code mentioned above.

It is a certainty that new disinfectant outlets will not open up automatically. The activity of public health authorities is helpful, but it should be backed up by new suggestions from manufacturers in all states.

—o—

A uniform method of handling the excise tax on liquid soap and shampoo bases, and on

(*Turn to Page* 103)

National Assn. of Insecticide *and* Disinfectant Manufacturers

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Notes of the Trade

G. H. Wood & Co., Ltd., Toronto, Canada, manufacturers of liquid soaps and sanitary products, were exhibitors of their line at the Canadian National Exhibition, held Aug. 26 to Sept. 10.

—o—

A new vegetable oil germicide has been discovered in Australia with a coefficient of eleven, and which is non-irritating and non-poisonous, according to an announcement of Australian Essential Oils, Ltd., of Sydney, N. S. W. The new product is derived from *Melaleuca alternifolia* and is being marketed in two forms, as an oil under the name of Titrol and saponified in a water solution under the name of Melasol.

—o—

A receiver has taken over the Idico Corp., 461 Eighth Ave., New York. D. W. Tannenbaum, president of the company, has been well-known and active in the disinfectant and sanitary supply business for many years.

—o—

Alex C. Fergusson, Jr., president of the Fergusson Drug Co., 126 North Third St., Philadelphia, announces that they have developed a new synthetic organic compound with a phenol coefficient of 162 and which is non-toxic, non-irritant, and non-corrosive, is soluble in alcohol and other organic solvents, and of low cost.

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Clifton Chemical Co., New York, manufacturer of sanitary specialties for the jobbing trade, has designed a series of stock labels for various products intended for imprinting with the jobber's name. Complete sets of these labels are available to the trade on request.

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Dr. H. D. Pease is now in direct supervision of Pease Laboratories, Inc., assisted by P. P. Gray director of the department of chemistry. L. C. Himebaugh, formerly on the Pease staff, has become director of research for Pepsodent Company.

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Vaporine Co., Chicago, manufacturer of insecticides has removed from 179 North Wells Street to 216 West Kinzie Street.

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Fe-Gene Company, Brooklyn, is offering a new germicidal preparation in tablet form for use in feminine hygiene.

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Century Chemical Products, Ltd., manufacturers of germicides and disinfectants, are reported to be planning a $25,000 factory at Welland, Ontario, Canada.

—o—

Imports of caustic potash into United States during June, 1932, totaled 197,866 lbs., all but 1,400 lbs. of this total coming from Germany.

New Insecticide, Fumigant and Disinfectant Patents

By Dr. R. C. Roark

Insecticide Division, Bur. Chemistry & Soils

VARIOUS recent patents relating to household insecticides, fumigants and disinfectants have been extracted and are reviewed herewith. These patents, along with others as reviewed by the author each month, were previously issued in the form of a printed bulletin under the title "Review of United States Patents Relating to Pest Control." These bulletins have been discontinued as part of the Government economy plan. The data concerning household insecticides and related products will be published from time to time in the Insecticide & Disinfectant Section of *Soap* and thus be made available to interested manufacturers and others.

1,851,007 (Mar. 29, 1932). Disinfectant and Preserving Agent. —Fritz Gunther, Karl Vierling and Wilhelm Pungs, Ludwigshafen-on-the-Rhine, Germany.—Winthrop Chemical Co., Inc., New York, N. Y.—A disinfectant and preserving agent comprises a compound crystallizing from benzene in large crystals, melting at 114-115° C. and obtainable as a by-product in the manufacture of thymol from meta-cresol. In the U. S. Patent 1,412,937 the process of manufacturing thymol is described, which comprises treating sulfonated meta-cresol with isopropyl alcohol and strong sulphuric acid, then splitting off the sulphonic group and subjecting the product to fractional distillation. Hereby, at first unaltered meta-cresol distills over, then thymol and at last "after-running" are obtained (compare U. S. Patent No. 1,412,937 lines 55-59). The "after-runnings" consist partly of a compound crystallizing from benzene in large crystals, melting at 114-115 degrees C. and corresponding to the formula: $C_{10}H_{14}O$, the remainder being oily constituents boiling above 200° C. The products contained in the "after-runnings" had hitherto no practical use. We have now found that the above mentioned compound melting at 114-115° C. as well as the oil constituents contained in the "after-runnings" possess excellent disinfecting and preserving properties. For example, staphylococci are destroyed by an 0.12 per cent aqueous solution of the said oil constituents in 10 minutes, whereas in the case of for example the well-known disinfectant lysol an 0.5 per cent aqueous solution is required therefor. For example, glue is excellently preserved by an addition of 0.2 per cent of isothymol, whereas an addition of 5 per cent of sodium benzoate does not prevent decomposition of the glue.

1,840,452 (Jan. 12, 1932). Cleaning and Disinfecting Compound. William E. Jones, Milwaukee, Wis.—Eagle Chemical Co., Milwaukee, Wis.—A cleaning and disinfecting substance substantially inert at atmospheric dryness and effective when mixed with water, consists of a dry mixture of common salt, 48½ parts bisulphate of soda, 48½ parts; an oxidizing agent, (e. g., KMn04) 1 part; and a substance tending to prevent lumping or consolidation, (e. g., corn starch) 2 parts, prior to the mixture of the compound with water. Other oxidizing agents which may be used are potassium chlorate, potassium nitrate or sodium nitrate.

1,842,933 (Jan. 26, 1932). Insecticide. Karl Marx and Hans Wesche, Dessau in Anheim, Germany.—Winthrop Chemical Co., Inc., New York, N. Y.—The patentees claim an insecticide containing as an active constituent an aliphatic ether of an ar-tetrahydro naphthol. Individual insecticides according to this invention are, for example, ar-alpha-tetrahydronaphthol-methyl ether, ar-alpha-tetrahydronaphtholethyl ether, ar-beta-tetrahydronaphtholmethyl ether and ar-beta-tetrahydronaphtholethyl ether. They may be used without being mixed with other insecticides or in an admixture with synthetic or natural insecticides, for example pyrethrum, or with extracts of such natural insecticides, with diluents or with vehicles. They may be applied in any desired manner, as dusting powders or by spraying in form of a solution or emulsion. By addition of viscous oils, for example, paraffine oil, the finely sprayed preparation remains for a long time suspended in the air. The following examples are given: (1) 1-2 com. ar-beta-tetra-hydronaphtholmethyl ether are sprayed per 1 cbm. of a room infected by flies. That is sufficient to kill all the flies in a very short time. (2) Five parts of ar-alpha-tetrahydronaphtholethyl ether are dissolved in 5 parts of butyl alcohol. 15 parts of an emulsifying agent are added, for instance, a solution of 50 per cent strength of the sodium salt of dibutylnaphthalene sulphonic acid. The mixture is then diluted to 100 parts with water. A solution of 2 per cent strength of this stock preparation yields an excellent spraying agent.

1,843,332 (Feb. 2, 1932). Insecticide. Karl Marx and Hans Wesche, Dessau in Anhalt, Germany.—Winthrop Chemical Co., Inc., New York, N. Y.—The patentees claim an insecticide containing as an active constituent an aliphatic ester of oxalic acid. It has been stated that these esters act against muscarians, for instance *Musca domestica*, and *Stomaxys calcitrans*. As known in the art, insects of this kind are very resistant against the action of the synthetic insecticides. The said esters may be applied in any desired manner. For instance by scattering in conjunction with the usual diluents or vehicles or by spraying in form of a solution in an organic solvent or in form of an aqueous emulsion prepared in the known manner. The oxalic acid esters may be mixed with other insecticides. Natural products containing effective insecticides, for example pyrethrum, may be extracted with the esters and the extract may be applied in the manner described above. Extracts of this mentioned natural product prepared with other solvents may be mixed with oxalic acid esters. By addition of a viscous oil, for instance paraffine oil, to the spraying preparations the finely sprayed substance remains for a long time suspended in the air. The esters are effective in killing insects, even when applied in very small quantities. When using oxalic acid diethyl ester, a quantity of 1-2 ccm. sprayed in 1 cbm. of the room is sufficient to destroy completely even many flies which are not killed by other well known preparations. Similar effects are obtained by a preparation made by mixing an ester of oxalic acid with an extract of pyrethrum in any solvent. To prepare an emulsion especially for combating bugs and lice 5 parts of oxalic acid ethyl ester are mixed with 5 parts of butyl alcohol and to the mixture are added 15 parts of an emulsifying preparation, for instance a solution of 50 per cent strength of the sodium salt of dibutylnaphthalenesulfonic acid. The mixture is then diluted with water to form 100 parts. An emulsion of 2 per cent strength of this stock preparation yields an excellent spraying agent.

1,843,579 (Feb. 2, 1932). Liquid Spraying Device. Franklin C. Nelson, Roselle Park, N. J.—Standard Oil Development Co., Del.—This liquid spraying device is of the type in which liquid is drawn from a source of supply and atomized by a blast of air or other gas passing over the opening of a suction or siphon tube. Provision is made for atomizing any liquid that may collect in the drip cup.

1,844,527 (Feb. 9, 1932). Device for Treating Articles of Furniture. William Rees, St. Louis, Mo.—This device comprises a spray gun and a spray nozzle associated therewith, designed for penetrating mattresses or other padded articles and injecting a suitable liquid in a highly atomized condition thereinto for the purpose of destroying bacteria, and preventing and nesting therein of insects. Any degree of vaporization of the insecticide is avoided as it has been found that the best results are obtained by injecting the insecticide in a finely atomized condition. In other words, the liquid particles of insecticide are more effective in destroying pests than vaporized insecticide.

1,845,059 (Feb. 16, 1932). Disinfectant. Theodor Sabalitschka, Berlin-Steglitz, Germany.—A disinfecting and preservative agent contains as an active constituent acetanisidine. For the manufacture of a disinfecting foot dusting powder 3 grams of acetanisidine, 20 grams of zinc oxide, 27 grams of wheat starch and 50 grams of talc are mixed to complete homogeneity.

1,854,948 (Apr. 19, 1932). Moth Proofing. William J. McGill, Whiting, Ind.—Standard Oil Co., Whiting, Ind.—The patentee claims a solution adapted for use in the moth proofing of fabrics, containing rotenone. A claim is also made for an article of manufacture comprising a mothproof fabric having rotenone incorporated therewith. The invention will readily be understood from the following example. One pound of derris root is ground to a powder and admixed with one gallon of petroleum naphtha, boiling between approximately 300 and 400° F. The mixture is allowed to stand at room temperature for a considerable period, for example, five to seven days, being occasionally agitated during this period. The hydrocarbon oil containing the desired active principles of the derris root is then removed, filtered clear and, if desired, minute amounts of essential oils or other suitable odoriferous substances may be added. In preparing the extract, if it is desired to hasten the operation, the mixture of oil and powdered root may be heated using linseed oil, peanut or cottonseed flours in proportions equivalent to the amounts of soya bean flour used in the illustrative examples.

1,856,062 (Apr. 26, 1932). Package and Generator for Fumigant Materials.—Harry W. Houghton, Glen Echo, Md.—Safety Fumigant Co., Mass.—The patentee claims a can of solid material inert in a dry state but active toward an acid, said can comprising a tinned iron bottom and sides and a zinc top, the whole being protected by a coating of paraffine, and a tab adapted, when pulled, to remove a portion of said paraffine coating from said zinc top. This invention relates to the packaging of fumigant materials and the generation of toxic gases therefrom, such, for example, as the hydrocyanic acid gas and cyanogen chloride gaseous fumigant described in a prior Patent No. 1,521,537, dated December 30, 1924, issued to Harry W. Houghton, Glen Echo, Md., and aims to provide a safe and convenient unitary package wherein the proper proportions of all ingredients necessary for the generation of predetermined quantities of fumigant gases may be safely transported and kept for indefinite periods.

1,856,544 (May 3, 1932). Ozonizer. Albert E. Evans, Cleveland, Ohio.—Corozone Co., Wilmington, Del.—A simple, inexpensive, quiet and practical electric device whereby ozone can be produced cheaply and reliably for purifying, disinfecting and deodorizing purposes in the toilet and sanitary rooms of hotels, office buildings, railway stations, steamships, public halls, theatres, and other places is described.

1,856,606 (May 3, 1932). Stabilization of Liquid Hydrocyanic Acid. Mark Walker. South Pasadena, Calif.—Pacific R. & H. Chemical Corp., Los Angeles, Calif.—A process of stabilizing liquid hydrocyanic acid comprises adding 0.005 per cent of sulphuric acid and thereafter adding 0.05 per cent to 0.5 per cent of sulfur dioxide, in addition to the amount of sulfur dioxide required to react with impurities (such as hydrogen sulfide) in the hydrocyanic acid. Test samples of liquid hydrocyanic acid stabilized by this reagent have stood in sealed containers at a temperature in excess of any prevailing in common carriers or storehouses, namely approximately 50° C. for more than five years without decomposition of a single sample. The results of numerous experiments indicate that the storage of hydrocyanic acid at 50° C. for five years is equivalent to keeping it twenty-five years at 20° C. Furthermore, sulfur dioxide has an advantage over practically all other stabilizers in that it penetrates and stabilizes the gaseous as well as the liquid phase of the hydrocyanic acid. Cyanogen chloride, a substance having an appreciable vapor pressure, has been proposed as a stabilizer for liquid hydrocyanic acid. However, the properties of cyanogen chloride make it less suitable than sulfur dioxide as a stabilizer for the vapor phase. This is because its vapor pressure is lower than that of sulfur dioxide, and also because there is a tendency for its vapor pressure to progressively decrease, due to the formation of a solid polymer. Moreover the use of cyanogen chloride is impracticable because of: (a) its high cost, (b) the difficulty in obtaining it in large quantity, (c) its injurious effects on the foliage of plants, (d) hazards to the health of workmen handling it, because of its extremely poisonous nature, and (e) its corrosive action on metals. Sulfur dioxide has none of these objectionable qualities. It is true that sulfur dioxide has a slight corrosive action in the presence of water, but it is very small compared to that of cyanogen chloride. Reference is made to U. S. Patent 1,571,982, issued to Mark Walker, South Pasadena, Calif.

1,856,657 (May 3, 1932). Fumigating Composition. Charles J. Romieux, Elizabeth, N. J.—American Cyanamid Co., New York, N. Y.—A fumigant comprises calcined brick granules of about 16 mesh having absorbed therein 30 to 50 per cent liquid hydrocyanic acid and 2 to 3 per cent chloropicrin, all by weight. The absorbent contemplated for use in the present invention is granular, calcined or burnt clay brick, with or without other calcined granular siliceous products such as the granular material obtained by crushing calcined brick made from infusorial earth, or this material alone. The calcined material is particularly valuable because of the porous nature of the material resulting from treatment at high temperatures during calcination or burning. The granular absorbent is preferably of 6 to 20 mesh. The fumigating mixture should preferably contain between 30 and 50 per cent hydrocyanic acid by weight, 45 per cent being the specific quantity most often utilized. Suitable stabilizing agents may be added to the mixture to prevent decomposition of the hydrocyanic acid. Sulfuric acid, oxalic acid and the like are among those which may be employed for this purpose.

1,856,809 (May 3, 1932). Rodent and Vermin Poison Device. Ransom P. Gibson and Harry W. Woody, Beverly, Kan.—One-third to W. W. McCanles.—A device for facilitating the placing of poisoned grain or the like into holes of runways of rodents or vermin for poisoning the same is described. An attachment for use in placing poison in ant hills is also described.

1,858,042 (May 10, 1932). Higher Alkyl Resorcinols. Alfred R. L. Dohme, Baltimore, Md.—Sharp & Dohme, Inc., Baltimore, Md.—The patentee claims new and useful germicidal and antiseptic products comprising alkyl resorcinols having not less than eight carbon atoms in the alkyl group. The melting and boiling points of the alkyl resorcinols containing eight to fourteen carbon atoms in the alkyl group are given.

1,857,318 (May 10, 1932). Hypochlorites. Charles Mindeleff, New York, N. Y.—Louise G. Robinovitch, Golden, Col.—The patentee claims the combination with a hypochlorite of a fragrant substance (e. g. a combination of the essential oils of lavender and of rose) covering the same and constituting a blanket against free access of air thereto.

1,860,231 (May 24, 1932). Method of and Device for Excluding Moths or Other Insects from Closets. Elliott R. Carpenter, Cotuit, Mass.—A holder for moth balls or other insect repellent material is designed for placing alongside the crack below the bottom edge of a closet door.

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Rotenone hydrochloride, acetyl-rotenone and rotenolone were studied to determine their toxicity, goldfish being used as the test animal. It was found that solutions of acetyl-rotenone and rotenone hydrochloride become toxic at about the same concentration, namely, 0.003 mgm. per liter. On the other hand, solutions of rotenolone become toxic at a concentration of 0.03 mgm. per liter. The threshold of toxicity of rotenone, less than half that of rotenolone, is 0.013 mgm. per liter. At higher concentrations, rotenone is considerably more toxic than these three compounds. At a concentration of 0.50 mgm. per liter the survival times in minutes are: rotenone 58, acetyl-rotenone 95, rotenone hydrochloride 125 and rotenolone 200. W. A. Gersdorff. Address before Denver meeting of American Chemical Society, 1932.

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A moth-proofing soap is made by the addition of salts of quaternary ammonium bases. Thus for example the soap may contain 10 per cent of triphenyl-dichlorobenzylphosphonium hydrochloride. The soap is effectively used on wool, hair and feathers. I. G. Farbenindustrie A. G., Frankfurt-am-Main, Germany. French Patent No. 717,976.

Uniform Method for Handling Soap Base Tax Suggested

IN spite of several interpretations from the Bureau of Internal Revenue of the excise tax law as it affects liquid soap base and shampoo base, either in solid or liquid form, much confusion exists among manufacturers and also among those who make the bases up into finished products. Several rulings of the Bureau have been examined and have also been discussed at length with several association executives and manufacturers. The conclusion is that a definite and specific policy should be laid down to clarify the situation and to secure, if possible, uniform practice among manufacturers. According to the law, and its interpretation as indicated by the Bureau of Internal Revenue thus far, there are optional methods of handling the tax on soap base and other semi-finished products. This tends to make for confusion and uncertainty.

Some manufacturers of liquid soap base and shampoo base are paying the tax and collecting it from their customers. These customers, or "last manufacturers," are also paying the 5 per cent tax on the finished packaged liquid soaps and shampoos, based on their selling prices, and are deducting the tax on the base from the tax which they pay on the finished article. In this way, the total tax paid is equal to the tax on the manufacturer's sales price for the finished article, which is as the law apparently intended.

This method of handling the tax is claimed to be about as sensible as any. In the first place, it does away with the bother of securing exemption certificates from customers, which in itself is quite a job as some houses are very slow to send them in. In the second place, it protects the manufacturer of the base soap fully, inasmuch as he *has paid* the 5 per cent tax on such base as he has sold and is certain that he has complied with the law no matter what future decision or interpretation of the law may be made by the Internal Revenue Bureau. The Bureau has been known to reverse itself in the past and there is no certainty that it may not reverse itself in the future. If the tax has been paid by the original manufacturer, there is no possibility that he may have to pay it in a lump plus interest at some future date when there is no hope of collecting it from his customers to whom the soap has been sold.

Finished Liquid Soap

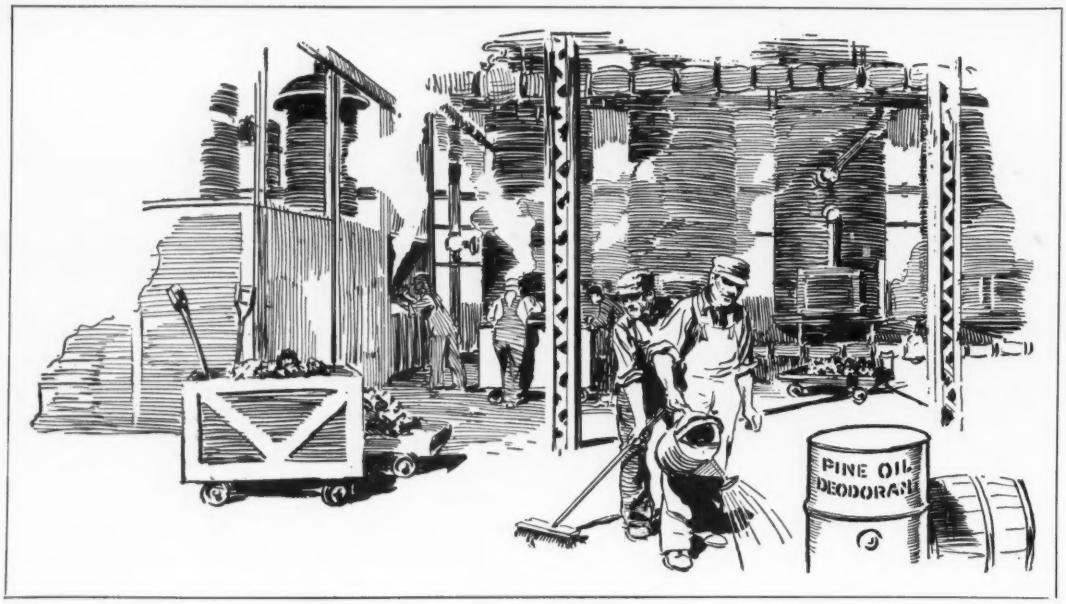
EXACTLY the same policy should apply to finished liquid soap and shampoo when sold in that form by the actual manufacturer. The tax of five per cent should be paid by the first manufacturer. If he sells it to a consumer who uses it as is without further processing, repackaging or change, then there is no further tax. If it is repackaged, or changed in any way for resale or use, then a tax must be paid at the rate of five per cent on the sales price of the last product, including the price of containers, closures, etc.

Examples may help to clarify the matter further, the following method of handling the tax being the one suggested as least confusing and least liable to cause future complications. "A," a soap manufacturer, sells 1,000 pounds of soap base to "B" at 10c. per pound. "A" pays the tax at the rate of 5% on $100, or $5.00. This he adds on the invoice to "B" as "U. S. Excise Tax . . . $5.00." "B" then dilutes the 1,000 pounds of base and makes up a finished liquid soap which he puts up in 750 one-gallon cans and sells direct to restaurants, hotels, factories, etc., at $1.00 per can. He reports and pays the tax on $750 at 5%, or $37.50. He deducts from this when he pays it, the $5.00 paid by the first manufacturer and charged to him, making the net amount of tax paid by "B" direct to the Collector of Internal Revenue $32.50.

In the case of a finished liquid soap or finished shampoo, the same principle applies. "A," the manufacturer, sells 100 gallons of 15% liquid soap to "B," a repacker or last manufacturer, at 35c. per gallon in drums. "A" pays the tax at 5%, or $1.75, and rebills it to "B," marking it on the invoice as a separate item. "B" puts the liquid soap up in one gallon cans and resells it at $1.00 per gallon. He pays the tax at 5% on $100, or $5.00, reporting and deducting from this amount the $1.75 paid by the original manufacturer and passed on to him.

If it so happens that "B" buys 100 gallons of shampoo at 50c. gallon (costing $50.00, plus $2.50 tax) and repacks it as is in 8 oz. bottles which are labelled and packed in cartons and cases of one or two dozen each, and sold at $2.00 per dozen, the tax is paid on a basis of this last price. The equivalent of 100 gallons would be 66⅔ dozen of bottled shampoo. This would sell for $133.33 which at 5% would give $6.67 tax. From this would be deducted $2.50, leaving a net tax to be paid by "B" of $4.17. There is one point, however, which should be emphasized. Where a previous tax payment is deducted, it must be deducted from the return made to the Revenue Collector for the month in which the transaction has taken place.

(Turn to Page 103)



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QQ-28

A German Opinion on Fly Spray Composition

THE composition of the modern fly spray varies, even though they may all contain a petroleum base, extract of pyrethrum, and a perfume bouquet. Analysis shows the presence of various organic and inorganic substances, some of which are toxic and others of no use at all, if not actually detrimental, according to a German writer in *Der Chemisch-Technische Fabrikant*. Thus, a fly spray has come to the author's attention containing nitrobenzene, a substance which is irritating to the mucous membranes and which has little toxic action. Another has been found to contain sodium fluoride*, which is a potent insecticide, but totally inactive in a fly spray. Various esters are also found in fly sprays, which may contain as well inert substances added for other purposes than to increase their toxic action.

It stands to reason that the main object of the fly spray manufacturer is to make a spray as toxic as possible compatible with economy. Furthermore, the fly spray must be as harmless as possible to human beings and domestic animals. Its odor must be pleasant. This excludes such substances as nitrobenzene which has a penetrating sickly odor, disagreeable to most people, and intense enough to penetrate almost any covering bouquet. The question that must be answered satisfactorily by the manufacturer is how can a fly spray be made that will fulfill all the requirements of toxicity, odor, non-staining action, and the like, without being injurious and too expensive to sell.

The German writer has made some interesting statements on this subject, to be sure from the German standpoint, but possessing certain interest to the American manufacturer. He says that a fly spray should contain the following ingredients:—1. Petroleum base; 2. first toxic component; 3. second toxic component; 4. third toxic component; 5. anti-protective component**; 6. perfume; 7. coloring matter; 8. component to render analysis difficult.

The composition is materially simplified by selecting toxic substances which also possess the properties of the required non-toxic components of the mixture. Thus a toxic substance may be used which is itself anti-protective, a coloring agent, agreeably odorous and able to render analysis difficult.

The requirements of the petroleum distillate are too well known to require discussion, the author says. The principal toxic component is of course the pyrethrins of the pyrethrum extract. The second is an essential oil, such as oil of turpentine and oil of thyme, and the third an organic chemical such as cymol, methyl salicylate, crude cresol, or other contact poisons. It may be mentioned here that certain experiments made by American manufacturers have proven the impracticality of adding additional contact poisons to fly sprays that contain the proper content of pyrethrins.

Substances that dissolve or destroy the protective films covering many insects—called anti-protective components—are fat and wax solvents. Various hydrocarbons, like tetrachlorethane, pentachlorethane, hexachlorethane and tetrachloroethylene are suitable. When the other components are properly chosen, the addition of perfume becomes unnecessary. When perfume is used, pine oil, camphor oil, bay oil and the like are recommended. The coloring matter should hide the fluoresence of the fly spray. Suitable colors are azobenzene, alkanna red, quinolin yellow, etc. When the base is dark colored, a desirable color can be obtained merely by refining the oil without adding any special coloring matter. Substances, which render analysis difficult, are stated as halogen, sulfur, nitrogen and metallic compounds.

Pannewitz gives four different formulae for making fly sprays which contain some, if not all, the aforementioned eight components and which have been found to give excellent results. These formulae include the following substances: a petroleum base, pyrethrum, cymol, oil of turpentine, methyl salicylate, tetrachlorethane, camphor oil, oil of thyme, eucalyptus oil, sassafras oil, nutmeg oil, trichloro-ethylene and derris root. The best results were obtained with a composition, containing kerosene, insect powder (pyrethrum), cymol, oil of turpentine, sassafras oil, nutmeg oil and tetrachlorethane. The tests were made on the common fly (musca domestica) and on the stinging fly (stomoxys calcitrans) in a chamber of 1.5 cubic meter content (about 53 cubic feet) with about 2 cc. of the fly spray. While the number of flies used is not given, it is claimed that all of the flies were "more or less stupefied on the bottom of the chamber" within two to three minutes.

It is also indicated that the inflammability of the fly spray made in this manner is disadvantageous. This difficulty is counteracted by emulsifying 75 parts of the kerosene-pyrethrum extract with 6 parts of trihy-

(*Turn to Page* 103)

* Must refer to products with water base containing NaF or Na_2SiF_6. Could not be a petroleum base fly spray. Probably a moth spray.—Editor's Note.

** Solvent for waxy coating on most insects.

Perfumes For

THEATRE SPRAYS

It makes no difference whether you use alcohol or water as a base. We can supply an odor to meet your requirements—an odor that will prove popular with your customers.

A few suggestions

for alcohol base sprays	Lb.	*for water base sprays*	Lb.
American Thistle No. 1010	$2.25	Bouquet W. S. No. 636	$3.25
Lilac No. 59	2.50	Honeysuckle W. S. No. 561	2.25
Gardenia No. 1756	5.00	Narcissus W. S. No. 3855	2.75
New Mown Hay No. 319	2.75	New Mown Hay W. S. No. 260	2.50
Peony No. 446	4.00	Lilac W. S. No. 19	2.50
Rose No. 310	2.50	Oriental W. S. No. 3858	2.50
Trefle No. 619	2.85	Rose W. S. No. 560	2.75
Violet No. 611	3.10	Trefle W. S. No. 4855	3.00
Wild Flowers No. 5300	1.75	Violet W. S. No. 261	2.75
Used one ounce to two gallons of alcohol—either full strength or diluted		Used one ounce to three or five gallons of water according to strength desired	

I&D MA — Insecticide and Disinfectant Manufacturers Association

P. R. DREYER INC.

12 E. 12th Street New York

"It's the Odor that Sells the Product"

Effect of Storage on Pyrethrum

A YEAR and sometimes two intervenes between the harvesting of pyrethrum flowers and their use in the form of insecticides. Long storage has been commonly recognized as detrimental to the activity of the pyrethrum due to decomposition of the active principle. The difficulty has been the absence until recently of an accurate method for determining the extent of loss of activity. Biological tests, formerly used, have been held to be inaccurate.

Experiments on both ground and powdered pyrethrum flowers (Japanese and Dalmatian Pyrethrum cinerariaefolium) were recently reported by C. B. Gnadinger and C. S. Corl in *Industrial and Engineering Chemistry* to determine the loss of pyrethrins in storage. The experiments on the ground flowers were made on a 300 kilogram batch ground in a commercial mill at less than 40 degrees C. After thorough mixing of the ground mass, it was packed into 500 gram containers, viz., open metal trays, unlined burlap bags, vacuum coffee cans and friction-top tin cans. The pyrethrum was also filled into a slack barrel, burlap bag, fiber drum and metal drum. The containers were stored at 26 to 30 degrees C in a modern concrete factory building. They were not exposed to direct sunlight. Samples were taken for analysis at various times.

It was found that the loss of pyrethrins over a year's storage varied from 30 to 43.6 per cent. It was largest in the open metal trays and smallest in metal drums. In the commercial packages, the loss was largest in the fiber drum, namely, 38.4 per cent. It was 33.3 per cent in friction-top tin cans.

The toxicity of the pyrethrum was determined by the Peet-Grady test using a kerosene extract. A part of the latter was stored in tin containers in the same room with the flowers. Based on a standard extract containing 75 mg. pyrethrins per 100 cc. (average kill 42 per cent) made from freshly ground flowers at the beginning of the storage experiments, the loss in toxicity of the extract made from flowers stored for one year in open trays was 22.7 per cent and that of the extract made from flowers stored for one year in friction top tin cans was 20.4 per cent. The corresponding reduction in pyrethrin content was to 42 and 50 mgms. per 100 ccm. respectively.

Additional experiments were carried out on miscellaneous samples of powdered and ground flowers stored in friction-top tin cans. Some of the most interesting results obtained were as follows: A sample of powdered Dalmatian open flowers lost 9.3 per cent pyrethrins over 8 months storage. A sample of powdered Dalmatian closed flowers lost 33.3 per cent in 30 months storage. Powdered Japanese pyrethrum lost 33.3 per cent in 18 months storage, while another powdered Japanese sample lost only 20.3 per cent in 30 months storage. A sample of ground American flowers lost 28.9 per cent in 31 months storage.

While no storage experiments were made on whole flowers, a large number of samples of Japanese flowers were analyzed for pyrethrin content. It was found that there was a noticeable decrease in the pyrethrin content of the 1929 and 1930 crops as the age of the flowers increased. No matter what type of container was used in storing the ground flowers, the loss was at least 30 per cent. The analysis of the ground and powdered pyrethrum in tin containers showed that the loss of pyrethrins continued after storage for more than two years.

—o—

"Rotenone Toxicity" was the subject of a paper by W. A. Gersdorff, delivered before the recent meeting of the American Chemical Society at Denver. A digest of the paper follows:

Solutions of acetyl-rotenone and rotenone hydrochloride become toxic at about the same concentration, 0.003 milligram per liter, but with solutions of rotenolone the threshold of toxicity is 0.03 milligram per liter. That of rotenone is less than half that of rotenolone 0.013 milligram per liter. At higher concentrations, rotenone is considerably more toxic than these three compounds; for example, at a concentration of 0.50 milligram per liter the survival times in minutes are: Rotenone, 58; acetylrotenone, 95; rotenone hydrochloride, 125; and rotenolone, 200.

—o—

The Yugoslav Government is continuing its efforts to advance its domestic pyrethrum flower industry by organization of producers, educational campaigns on production methods, control of packing and grade standardization, according to a report from U. S. commercial attache Emil Welsich, Belgrade. It is also attempting to establish definitely the toxic value of its pyrethrum through tests conducted outside the Kingdom. An official has been appointed to act under the authority of the Ministry of Commerce to supervise the reorganization of the industry. It is understood that the prpesent pyrethrum crop, harvested in May and early June, amounts to over 600 tons. There remains on hand a considerable amount of old stock.

—o—

Roteneone is suggested for use as an ingredient of mothproofing preparations, according to United States Patent No. 1,854,948, assigned to Standard Oil Co., Whiting, Ind.

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KEREX CHERIE
KEREX FLEURIE

Two Perfume Oils French in character—

Exclusive in quality—distinctive in odor

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Say you saw it in SOAP!

What Should an Exterminator Know?

OPERATING on the basis that an exterminator or fumigator who does not know his business and who is not familiar with the product used in his work is a menace to the life and health of the community, the Department of Health of New York City is enforcing rigidly the recent amendment to the Sanitary Code requiring the examination and licensing of all persons who conduct a firm in the field of fumigation and extermination and operatives employed by them. Examinations are held weekly by the Health Department.

A representative of *Soap* was permitted to sit in at a recent examination in which 115 owners and employes came before the examining board. The Board consists of Dr. A. Blauvelt, Dr. John Oberwager, and Dr. Edward Bocker, all officials of the Health Department with many years of experience in public health work. Most of the questioning of candidates for licenses was done by Dr. Bocker, with occasional questioning by the other two examiners.

Three significant things were brought out by the examination and the manner in which it was conducted. First, the necessity of regulating and licensing exterminating and fumigating was definitely upheld in the mind of a disinterested observer. It could not have been more apparent that licensing is vitally necessary and the recent revision of the New York Sanitary Code, covering this point, essential. Second, that the examination is fair and fairly conducted, and is an accurate measure of the knowledge and ability of those who take it; and that it does effectively weed out the ignorant and incompetent, and in this way, helps to safeguard the public health. Third, that the new code and the examining board plays no favorites. The examination is devoid of politics and political considerations or significance. The applicant who knows his business, gets a license; the one who does not is rejected.

The line of questioning by the examiners and the answers were very interesting. Questions on the products of extermination and fumigation, and practical operating and safety problems were used exclusively in the examinations. For the exterminating license, which is a separate examination from fumigating (the latter being far more difficult and extensive), some of the questions were: "What do you use against roaches?" Correct answer: Sodium fluoride. pyrethrum, borax, and phosphorus paste. "What color sodium fluoride?" Answer: Official nile blue as white is now illegal in New York City under the revised code. "Would you use sodium fluoride in ridding a large ice box of roaches, in a restaurant kitchen, or elsewhere where foods are prepared or stored?" Answer: No. It is against the law. Use pyrethrum powder which is not poisonous. "Is sodium fluoride poisonous; is phosphorus poisonous?" Answer: Yes in both cases.

"What products do you use against rats and mice?" Answer: Arsenic preparations, phosphorus paste, red squill, barium carbonate, thallium sulfate, strychnine, trapping. Poisoned grain treated with strychnine or thallium sulfate. "Which is the preferred product against rats?" Answer: Red squill is generally best as it is non-poisonous to humans and domestic animals, but deadly to rodents. "Are all these products poisonous except red squill?" Answer: Yes. "Why is squill not poisonous to humans." Answer: Is immediately vomited up.

"Suppose you had an accident,—somebody accidentally took internally one of these poisonous materials, what would you do or recommend?" Answer: First, call a physician or ambulance; second, induce vomiting by giving an emetic such as a large tablespoon of mustard in warm water, or if no mustard is handy, put your finger down the throat of the victim and induce vomiting by gagging.

"What do you use against bed bugs?" Answer: Pyrethrum extract; solution of cresylic acid in kerosene. "How do you use them?" Answer: Spray bed, springs, mattresses, moulding, base board, and all cracks and crevices thoroughly, and repeat when necessary. "What do you use against fleas?" Answer, pyrethrum powder and pyrethrum extract. "What do you use against moths?" Answer: Pyrethrum extract, naphthalene, paradichlorbenzene.

Numerous questions were also asked on methods, procedure, precautions, and practical safety measures in exterminating. The examination for fumigating license was considerably more complex and detailed. It covered the various fumigants, methods of use, weather conditions, but chiefly safety factors in fumigating. Of the total applicants for licenses, approximately only ten per cent were for fumigating, the balance being for exterminating. Of the 115 applicants who were examined, about twenty-five per cent failed to pass. These are given an opportunity at a later date to take the examination again.

—o—

A new moth repellant invented by the chemists of I. G. Ferbenindustrie, Germany, consists of a combination of soap with readily soluble salts of selenic and selenious acids. It is said that solution contains 90 parts soap and 10 parts sodium selenate. The German copper industry would welcome a new, important, trade outlet for selenium.

REFLECTING *beauty and utility*

That packages be pleasing to the eye is of recognized importance...for their influence on sales. That they be convenient and practical is equally important... for their influence on repeat sales. Today it is well-nigh universally admitted that every element of the package, closure included, should reflect these qualities.

But of equal importance, or greater, is the fact that your package is your sole representative in the mind of the public. As such, it should reflect YOU... your business principles, your ideas of serving, your pride in your product, your determination to maintain and preserve product quality... Let your package and its closure represent you worthily, not cheaply.

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ANCHOR IS CLOSURE HEADQUARTERS

Say you saw it in SOAP!

Insecticide, Disinfectant Output Lower

ACCORDING to preliminary data just made available by the U. S. Bureau of the Census, a substantial drop was recorded in 1931 in the manufacture of antiseptics, deodorants, household insecticides, disinfectants, germicides, agricultural insecticides, boiler compounds, etc. The total value of these products in 1931 is reported as $75,557, a decline of approximately 25% from the $101,913 total of 1929, the last preceding census year. The 1931 figures are preliminary and subject to revision.

Incidentally they do not agree in many cases with unofficial estimates made by informed individuals in the industry, the Census figures for 1931 being in each case substantially lower than the unofficial estimates of actual production. This may be partially due to the fact that in the preliminary 1931 returns reports have not yet ben included for a number of firms whose 1929 production is reported in the 1929 figures. The following table gives comparative figures for the two years. Where blanks occur in the 1929 column this is because no figures comparable with those for 1931 are available. The figures for 1931 represent production; those for 1929 refer to sales (shipments or deliveries) by manufacturers. As the 1931 items are based in small part on estimates, they are given in round figures.

Production of Patent and Proprietary Compounds—1931 and 1929

	1931	1929
Patent or proprietary compounds, total value	$75,557,000	$101,913,089
Antiseptics, value	$22,006,000	$21,799,004
Deodorants, other than for human use, total value	$1,467,000	(2)
Liquid — Pounds	4,870,000	(2)
Value	$591,000	(2)
Block and crystal — Pounds	1,128,000	(2)
Value	$627,000	(2)
Powder — Pounds	956,000	(2)
Value	$195,000	(2)
Other — Pounds	124,000	(2)
Value	$54,000	(2)
Germicides, value	$1,513,000	$2,482,798
Disinfectants, insecticides, and fungicides:		
Disinfectants, total value	$5,335,000	$7,331,787
Coal-tar — Pounds	21,901,000	21,773,790
Value	$3,756,000	$4,637,106
Pine oil — Pounds	2,538,000	1,831,653
Value	$523,000	$426,874
Chloride of lime and chlorine products — Pounds	4,421,000	2,835,904
Value	$544,000	$536,424
Other — Pounds	3,048,000	11,280,930
Value	$512,000	$1,731,383
Household insecticides, total value	$12,514,000	$15,077,107
Sprays, fly — Pounds	33,278,000	36,685,374
Value	$6,960,000	$9,322,578
Insect powder (Pyrethrum) — Pounds	4,735,000	5,542,498
Value	$1,846,000	$2,446,524
Fluoride powders and mixtures — Pounds	910,000	700,845
Value	$416,000	$385,199
Moth repellents — Pounds	5,050,000	2,364,401
Value	$1,472,000	$799,774
Other — Pounds	11,511,000	8,954,579
Value	$1,820,000	$2,123,032
Agricultural insecticides and fungicides, value 3/	$8,294,000	$10,339,835
Disinfectants and insecticides not reported by kind, value	$2,540,000	$3,345,314
Boiler compounds, value	$3,348,000	$5,083,950
Household ammonia, value	$1,010,000	$1,253,149
Other compounds, value	$17,530,000	$35,200,145

Exports of liquid household insecticides from United States during July, 1932, totaled 156,270 lbs., worth $51,173, and paste and powdered products totaled 35,640 lbs., worth $10,291. This compares with a combined total of 479,239 lbs., worth $127,884, for the same month of 1931. Exports of household disinfectants, deodorants, germicides and similar preparations in July, 1932, were 90,150 lbs., worth $8,172, as against 176,522 lbs., priced at $17,164, during July, 1931.

—o—

A new publication on the subject of "Foremen's Safety Conferences" has just been issued by the Policyholders Service Bureau of the Metropolitan Life Insurance Company, copies being available on application to the company's office at One Madison Avenue, New York. The report offers suggested programs for a series of seven informal conferences to discuss the various phases of safety work, these meetings being presided over by some such representative of the management as the works manager, the general superintendent, or the director of safety. The programs, which are confined to the fundamental principles of safety work as applied to all types of industry, were developed following a review of the activities of a number of industrial organizations in the United States.

—o—

For the fiscal year ended June 30, Clorox Chemical Company earned net income of $262,983, after depreciation, Federal taxes, and other charges. This was equal to $2.31 a share on 113,756 no-par capital shares. It compared with a net income of $258,009 for the previous year, or $2.18 a share on the 118,156 combined class A and B shares. All A and B shares were changed on January 1 of this year to no-par capital shares.

—o—

Oil and Fat Consumption

(*From Page* 51)

pounds entered into the products of miscellaneous industries in 1929 but last year this quantity was more than halved. Other consumption was scattered. Manufacturers of oleomargarine reported a consumption of 48¼ million pounds or 85 per cent of the entire consumption of oleo oil in 1929; last year this use dropped to 18,785,000 pounds or 60 per cent of the total. Manufacturers of compounds found a place for 7½ million pounds or more than 13 per cent in 1929 and 10 million pounds or close to one-third in 1931. Furthermore, this gain is really even greater because two million pounds of oleo oil were made use of last year by manufacturers of other edible products and it is obvious that oleo oil must have had this same outlet two years previously though the exact quantity cannot be determined as there was no separation in the statement for that year. The remainder of the consumption was distributed in much smaller amounts between several industries.

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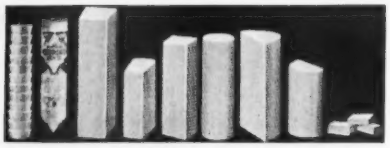

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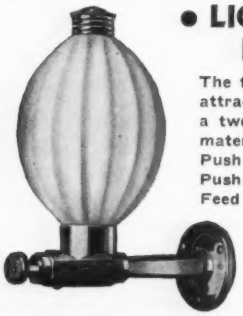
Produced by the pioneers and original patentees of moulded blocs. Hard uniformly perfumed blocs made of 100% para and finest essential oils. In sizes and shapes to fit any containers. Colors and odors to meet current demand. Packed for you under your private label if desired. Also Urinal Blocettes individually wrapped in cellophane and Deodorizing Crystals in bulk or packed in handsome lithographed tins with or without our name.



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The famous "SOAPERIOR" line. Strong, attractive leak-proof dispensers carrying a two years' guarantee against defect in material or workmanship.

Push-in Valve type (illustrated) and Push-up Individual Dispensers—Gravity Feed Equipment. Portable and Wall type Dispensers for Hospitals. Made in our own shops of top-notch materials. Yet priced surprisingly low.

• LIQUID TOILET SOAPS

Concentrated 42% Soaps made of finest edible Cochin Cocoanut Oil or Olive Oil—bland, neutral, absolutely pure and free of fillers or adulterants. Also Prepared Soaps to meet any specifications. Special soaps for Industrial and Surgical use and pure Castile Infants Soap for hospitals.

• POLISHES

High-grade Metal Polishes which remove tarnish but do not scratch or blemish brass, silver, copper, etc. Fine quick-drying Furniture Polishes. Non-inflammable and easy to apply.

• LIQUID SCRUBBING SOAPS

A type for every floor—to meet any price requirement. Cleaners for fine wood, tile, marble, linoleum, cork, rubber, rubber tile, terrazzo, travertine floors. Approved by leading manufacturers of fine flooring.

• BLOC CONTAINERS

Neat distinguished perforated containers, made of 24 gauge heavy metal—equipped with lock and sliding back.

In White Enamel, Porcelain, Oxidize or Nickel Plate with your nameplate or plain.

• DISINFECTANTS

Of Pine Oil containing 70% pure steam-distilled pine oil—also lower cost Pine Disinfectants and Deodorants. Coal-tar Disinfectants ranging from high-coefficient 18-20 to low-priced products made to sell at a price.

Liquid and Powder Chlorine Disinfectants. Each batch tested and germicidal strength guaranteed.

• SOAP AND SHAMPOO BASES

Made from special blends of Cocoanut or Olive Oil—concentrated to 65% soap solids—producing more soap per pound than average base and making fine blend generous-lathering soaps.

• FLOOR SURFACING MATERIALS

Mopping Varnishes—Quick-drying rubless Waxes—Floor Sealers, etc. Special finishes for linoleum, terrazzo, tile, cork, slate, marble, concrete, travertine, magnesite, quarry, rubber, rubber tile, soft asphalt and bitumen floors. Let us solve your special floor problem.

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High-powered but non-poisonous stainless and odorless fly sprays meeting the Insecticide and Disinfectant Manufacturers' standard. Also Concentrated Fly Spray (may be diluted with 19 parts petroleum oil to make 20 gals. full strength spray).

Ready-to-sell Insecticides—Specifics for Bedbugs—Mothicides—Larvaecides—Mill and Weevil Sprays.

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U. S. SANITARY SPECIALTIES CORPORATION

433-41 So. Western Avenue, Chicago, Illinois

Say you saw it in SOAP!

As with other edible animal fats, the bulk of the lard goes directly into consumption; hence only a fraction of the production appears as factory consumption. In 1929 this latter total was 45,869,000 pounds, about evenly divided between manufacturers of lard compounds and oleomargarine. Last year with the separate enumeration provided for edible products other than compounds, shortenings and oleomargarine, total factory consumption was reported as 22,277,000 pounds or about half of that of two years before. Compound manufacturers took 8,860,000 pounds or 40 per cent, the oleomargarine industry just under 10 million pounds or over 43 per cent, and other edible products most of the balance (15 per cent). Neatsfoot oil went almost exclusively into the manufacture of miscellaneous products, 6,330,000 pounds in 1929 and roughly 5 million pounds were thus employed during last year. In all likelihood, most of it was taken by manufacturers of leather dressing preparations.

Consumption

IN 1929 approximately 15 million pounds of fish and whale oils were processed and placed on the market as cooking fats. That year no distinction was made as between fish and marine animal (whale and seal) oils. This was done, however, in the statement for last year which credited over 19 million pounds,—2,700,000 pounds of whale and 16,700,000 pounds of fish oils,—to this consumptive use. The 1929 statement carried a figure of 188,102,000 pounds of fish and whale oils as the total factory consumption. Since the net quantity of whale oil available for consumption in United States during that year was 70,664,000 pounds, somewhere in the neighborhood of this amount of whale oil undoubtedly was embraced in the figure cited, leaving fish oils at 118 million pounds. Of the aggregate total (1929), 130,634,000 pounds or 70 per cent became a soap fat whereas last year 68,669,000 pounds of whale oil and 58,426,000 pounds of fish oils, or two-thirds of the combined total (193,339,000 pounds) were so utilized. Factory consumption of fish oils in the paint and varnish industry for 1929 was 10,602,000 pounds or less than 6 per cent, and, in 1931, 12,107,000 pounds or 10 per cent; by linoleum manufacturers, in 1929 and 1931 respectively, 10,141,000 pounds or about 5 per cent and 14,837,000 pounds or over 12 per cent.

Apart from the diversion of whale oil to the industries already mentioned, the only other outlet worthy of note was miscellaneous industries wherein 1,100,000 pounds or less than 2 per cent and probably inclusive of some seal oil, were consumed last year. The same group of industries reported 17 million pounds or nearly 15 per cent of the total fish oil consumption and, in 1929, accounted for 21¾ million pounds or around 12 per cent of the consumption of fish and whale oils together. Loss in refining and "foots" last year reached a total of 1½ million pounds or nearly 13 per cent for the fish oil industry.

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SUCCESS or failure in marketing Insecticide depend upon the sprayer used in application.

The Nu Day is the accepted standard: leakless, dripless, and will not syphon. Proportioned to produce the most effective break-up of insecticide.

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Standardized - Concentrated

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We hope our present and prospective customers will not hesitate to call upon us for any information regarding our Pyrethrum Products. A qualified Entomologist is in charge of our Entomological Laboratory and all testing of Pyrethrum Products is carried on, under his personal supervision, by the Peet-Grady and Richardson methods.

Our Analytical Department, where the qualities of Hopkins' REDRATSQUIL, DERRIS PRODUCTS, and other insecticidal materials are scientifically determined, is in charge of our Chief Chemist.

These two Scientific Departments are at your disposal in any way you can be assisted.

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for 34 years

Makers of
Coal Tar Disinfectants
Stock Dips
Pine Oil Disinfectants
Insecticides
Polishes
Cleansers
Liquid Soaps
Spray Products
Roofing Cements

for the Wholesale and Jobbing Trades Only

DISINFECTANTS

Pine Oil Disinfectant, H. L.
Pure Hygienic Laboratory Pine Oil Disinfectant containing 70% steam distilled pine oil. Finest quality pine disinfectant.

Pine Disinfectant Comp.
Lower cost disinfectant compound containing 40% pure steam distilled pine oil as chief active ingredient.

Pine Odor Deodorant
Non-medicinal pine odor deodorant of low cost for use in chemical closets, livery stables, kennels, etc.

Coal Tar Dip, No. 1
Coal-tar disinfectant containing 20 to 25% phenols and having a phenol coefficient by H. L. Method of 4 to 6.

Coal Tar Dip, No. 2
Lower cost coal-tar disinfectant with a phenol coefficient by the H. L. Method of 2 to 3.

Insecticide Dips
Low cost disinfectants of creosote oil base. In two grades, having phenol coefficients of approximately 2 and of 1 by H. L.

Send for samples, prices, and details.

CHEMICAL SUPPLY COMPANY
2450 Canal Road **Cleveland, O.**
Established 1898

Say you saw it in SOAP!

The beautiful summer home of Mr. and Mrs. C. Campbell Baird at Dennisport on Cape Cod, Massachusetts. "Sunnylaw" it is called, and here Campbell hides away during the hot months of the summer, commuting by automobile to his office and plant at Holbrook, Mass. Mr. Baird is president of Baird & McGuire, Inc. If it can be said that he has a hobby outside of disinfectants, "Sunnylaw" is it.

—o—

Net income of Drug, Incorporated for the six months ended June 30, 1932, after all charges, totaled $7,684,-021 compared with $10,656,053 for the first six months of 1931. The earnings for the first six months this year are equivalent to $2.19 per share on the 3,501,499 shares outstanding at the end of the period. This compares with $3.04 per share on the same number of shares outstanding on June 30, 1931. Current assets on June 30 stood at $58,830,145 (with cash of $14,637,704 and marketable securities of $11,842,359) as against current liabilities of $8,350,523, a ratio of seven to one.

—o—

The suit brought by Owl Drug Company against Drug, Inc., United Drug Company and Louis K. Liggett Company has been compromised on the basis of United Drug Company's offer to exchange one share of Drug, Inc., common stock for two and a half shares of Owl preferred, and cancellation of an indebtedness of $500,000 covering goods sold to Owl by United Drug.

—o—

A complete line of inexpensive metal screw caps for wide and narrow mouth ware has been announced by Armstrong Cork & Insulation Company, Cork Division, Lancaster, Pa. With the addition of this type of cap, the Armstrong Closure Line now contains all of the leading types of closures. The new line of Armstrong's Metal Caps includes both single shell and double shell types, available in standard stock designs of various colors, and also supplied in special decorations.

—o—

Burt Machine Co., Baltimore, has introduced a new straight line labeler to meet the growing demand for high labeling production. Two models are available, with outputs of 60 and 120 packages per minute.

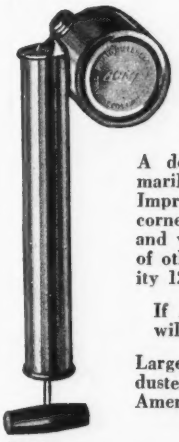
SUPER METAL ACME BILT WARE

—when Spraying Materials Require BETTER Sprayers

To the makers of spraying materials that require utmost accuracy of atomization, this Superbilt ACME Combination Sprayer is especially recommended. The important feature, a new Air Regulator, provides a wide range of accurate nozzle adjustments to accommodate any demand from a heavy spray to the finest fog. This

ACME Superbilt Combination Sprayer

—may provide the "lucky combination" which will insure your product greater popularity and a greater profit for you. Its uses are many. It is of superior adaptability for fly spray, floor oil, insecticides, etc. Very strongly made of heavy sheet steel, size 6¼ x 13, riveted and soldered. Capacty 1½ gallons.



ACME Insecticide Sprayer No. 370

A decidedly BETTER sprayer designed primarily for fly oils and household insecticides. Improved syphon tube permits spraying up into corners and on ceiling. Exceptionally effective and very popular. See catalog for description of other superior points. Size 1½ x 10, capacity 12 ounces.

If ACME hasn't the sprayer you want, we will make one to fill your needs.

Largest exclusive manufacturers of sprayers, dusters and hand corn and potato planters in America. Catalog and prices upon request.

Potato Implement Company

Traverse City **Michigan**

Say you saw it in SOAP!

OIL ROSEBUD BOUQUET MM&R

Why use a mediocre Rose odor in your para and Napthalene blocks when "Oil Rosebud Bouquet" is available.

It embodies the fragrance and freshness of the flower, yet is sufficiently powerful to overcome para crystals and Napthalene.

Priced within a range which permits its use in even the lowest cost materials.

Send for a sample of this splendid Bouquet.

MAGNUS, MABEE & REYNARD, INC.
ESSENTIAL OILS
32 CLIFF ST.
NEW YORK, N. Y.

HUDSON SPRAYERS *for* Correct Application

•

A good insecticide is at the mercy of the sprayer with which it is applied. A poor insecticide has little or nothing at stake in that regard.

•

There *is* a difference in sprayers. There *is* a difference, in the results obtained, between a correctly and an incorrectly designed machine.

•

The correct type of sprayer can't do much *for* or *against* a poor product. An incorrectly designed sprayer can give a meritorious product a mighty bad "break" . . . and usually does.

•

If that were not true, we could scrap our engineering department and testing laboratory. And you could forget about the biggest gamble in your business—the application of your product in the hands of Mrs. American Housewife!

It is important to remember that the formula for building Hudson Sprayers is largely the result of suggestions offered over a period of years by leading insecticide manufacturers of the country.

Our special representative will be glad to call and demonstrate the various types of sprayers in the Hudson Line.

H.D.HUDSON MANUFACTURING CO.
589 E. ILLINOIS ST.
CHICAGO, ILL.

New York City Minneapolis, Minn. Omaha
San Francisco Philadelphia Kansas City, Mo.

Say you saw it in SOAP!

Mineral Oil in Disinfectants

The following bulletin covering the use of mineral oil in disinfectants and the label requirements in such cases, has been sent to the membership of the National Association of Insecticide & Disinfectant Manufacturers by Harry W. Cole, Secretary:

"Despite the fact that in years gone by the United States Department of Agriculture, through its Insecticide and Fungicide Board, issued many citations against manufacturers of disinfectants who employed mineral oil in their compounds without declaring its presence, we still receive an occasional inquiry as to whether it is lawful or permissible to use petroleum oil as an ingredient in disinfectants. For the particular benefit of those who may not be familiar with the provisions of the Federal Insecticide Act of 1910 and the rulings of the U. S. Department of Agriculture for its enforcement, we will say that it has been repeatedly held that mineral oil has no germicidal power and must therefore be considered inert in a disinfectant. There is, however, no provision in the Insecticide Act of 1910 prohibiting the presence of mineral oil in a disinfectant provided the label bears a satisfactory ingredient statement and the claims are not false or misleading in any way.

"It would not be satisfactory to sell a mixture of say pine oil, mineral oil, soap and water as a 'Pine Oil Disinfectant.' The quoted name is only partially descriptive for such a preparation and therefore would be misleading. When a purchaser buys pine oil disinfectant he expects to get a mixture of pine oil, an emulsifier and water, but no mineral oil. No objection is raised to a non-descriptive name or to such a name as 'Pine Oil and Mineral Oil Disinfectant' or 'Mineral Oil and Pine Oil Disinfectant' depending upon which was the predominant constituent, for a mixture of pine oil, mineral oil, soap and water, if the product was effective as a disinfectant when used as directed. Either of the following forms of ingredient statement would be satisfactory for such a preparation:

ACTIVE INGREDIENTS:
Pine Oil ....%
Soap ....%

INERT INGREDIENTS ....%
Total 100%

or

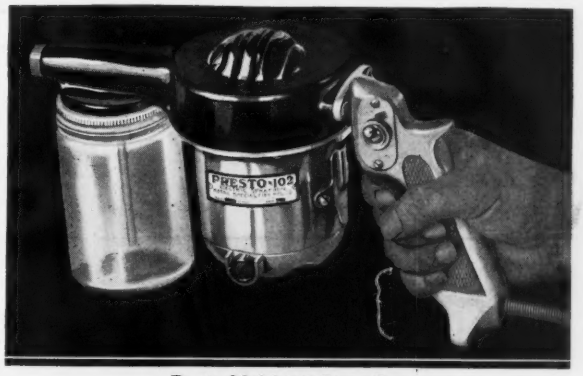
INERT INGREDIENTS:
Mineral Oil ....%
Water ....%

the correct values being inserted in the blank spaces where indicated.

"This ruling is not new, but it will bear repeating for it is so easy to forget. All that is said of pine oil disinfectants applies equally to disinfectants made from coal-tar, or any other type of disinfectant in which mineral oil may be used as an ingredient.

"A number of years ago certain manufacturers of disinfectants of whose products mineral oil formed a part, without the presence of such oil being declared upon the label, were prosecuted for misbranding or adulteration. Some of these makers continued to offer their materials without any change in composition, but they did change the name. For example, products which were formerly sold as coal-tar disinfectants were afterward advertised as coal-tar disinfectants and insecticides, for it was established that mineral oil, while lacking germicidal properties, did have a certain value as an insecticide. In this say these makers met the requirements of law. It soon became apparent, however, that disinfectants bearing the dual designation contained mineral oil. Disinfectant salesmen as well as the houses they represented gave wide publicity to this fact and discriminating buyers refused to purchase a product which they believed to be "doped."

"The economic conditions under which business has been obliged to operate for the past several years has probably proven an incentive in some few cases to return to the use of mineral oil in disinfectants, for any adulterant of this type serves to lessen the expense of producing the product, and by adding to its volume permits the cutting of prices. The unsuspecting buyer instead of effecting a saving, is actually paying for lessened value. Such practices tend to demoralize the industry and weaken the public confidence in disinfectants.



Presto Model 102 Spray Gun

Let Presto Model 102 Electric Spray Gun

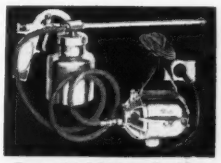
HELP SELL . . . .

INSECTICIDES and DISINFECTANTS

CORRECT application of insecticides, disinfectants, deodorants, and moth proofing liquids is quite as important as an effective formula. Make it easy for users to get maximum effectiveness with your products by furnishing or recommending Presto units - the perfected lightweight, easy to use electric sprayers.

Thousands are in use in hospitals, institutions, hotels, poultry houses, greenhouses, stores, dairies, grain mills, for spraying disinfectants, insecticides, and similar products. Presto's speed, convenience, economy and proper atomization are necessary features for large and small users alike.

The new Presto Model 88-94 shoulder strap spraying outfit, with extension nozzle gun and rotary compressor is especially suited to spraying liquid insecticides and disinfectants, in industrial plants, institutions, dairies and for other large users. Presto Model 102 is the convenient general purpose unit for average use. Thousands are in service.



Presto Model 88-94 Shoulder Strap Electric Spraying Unit

Manufacturers and distributors who have tried out Presto units find that this service to users means a substantial increase in sales and profits. Find out how to use this sales stimulator. Get full information on the superior features of construction and operation that make Presto the leading lightweight sprayer units. Check the coupon and mail it now.

METAL SPECIALTIES MFG. CO.
3200 Carroll Ave. at Kedzie Ave.
Chicago, Illinois

Send full details of Presto Insecticide Spray Gun features and sales plan.

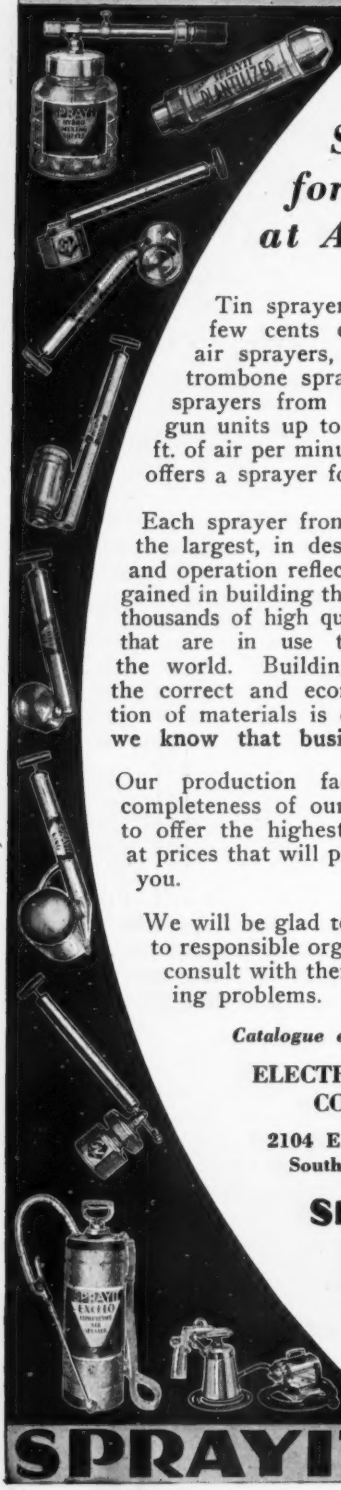
Name _____

Address _____

City _____ State _____

Say you saw it in SOAP!

COMPLETE LINE of SPRAYING EQUIPMENT



There's a SPRAYIT for Any Need at Any Price

Tin sprayers that sell for a few cents each, compressed air sprayers, bucket sprayers, trombone sprayers, electric sprayers from the smallest cup gun units up to outfits of 10 cu. ft. of air per minute. Only Sprayit offers a sprayer for every purpose.

Each sprayer from the smallest to the largest, in design, construction and operation reflects the experience gained in building the thousands upon thousands of high quality SPRAYITS that are in use throughout the world. Building equipment for the correct and economical atomization of materials is our business and we know that business thoroughly.

Our production facilities and the completeness of our line enables us to offer the highest quality sprayer at prices that will prove attractive to you.

We will be glad to submit samples to responsible organizations and to consult with them on their spraying problems.

Catalogue on request

ELECTRIC SPRAYIT COMPANY

2104 E. Colfax Ave., South Bend, Ind.

SEND FOR NEW 32 CATALOG

SPRAYIT

REILLY

Coal Tar PRODUCTS
Carbon PRODUCTS
Chemicals

CRESYLIC ACID
CRESOL
CRESOL U. S. P.
XYLENOL
TAR ACID OILS

- - and other Coal Tar Chemicals for the

SOAP and DISINFECTANT INDUSTRY

REILLY

CHEMICAL CO., Inc.

Merchants Bank Bldg.
INDIANAPOLIS

Say you saw it in SOAP!

"If at any time any question arises pertaining to the enforcement of the Insecticide Act of 1910, we shall be glad to have you write. If the exact information you desire is not already on file, we can obtain it for you quickly."

—o—

The annual fall meeting of the Board of Governors of the National Association of Insecticide & Disinfectant Manufacturers was held at the Hotel New Yorker on Tuesday afternoon, Sept. 13. Plans for the 19th Annual Meeting of the Association, to be held at the same hotel on December 12 and 13, were made. Evans E. A. Stone, president of William Peterman, Inc., and head of the Association, presided.

—o—

The file of *Soap* in the main branch of the New York Public Library, 5th Ave. and 42d St., New York, is missing two issues in the 1932 volume which the publishers are unable to supply. E. H. Anderson, director of the library, earnestly requests that any firms or individuals in the trade who have extra copies of January and April, 1932, issues, to contribute them to the library to complete the file.

—o—

M. B. Feinson, vice-president and eastern manager for Bobrick Manufacturing Co., is convalescing from an operation at his home in Brooklyn. He expects to return to his office in about another week, after having been away from his office for over a month.

—o—

Henry Nelson, vice-president of the Chemical Supply Co., Cleveland, recently purchased a summer cottage near Kent, Ohio, about thirty miles from Cleveland on the shore of Twin Lakes. Mr. and Mrs. Nelson and their son have just returned to their Cleveland home after spending the latter part of the summer at the cottage.

—o—

American automobile polishes enjoy a good sale throughout India, according to U. S. Trade Commissioner George C. Howard, Calcutta. In the export trade of the United States for automobile polishes during 1931, India was the fifth largest purchaser taking 56,623 pounds, having a value of $16,295. American brands are the most popular on the market and are followed by a British product called "Karpol." Recently an Indian polish and lacquer finish has appeared for sale and cost is reported to be about half that of similar imported products. Consumption of automobile polishes has undergone a marked decline during the last year.

—o—

Exports of dental creams from United States during July, 1932, totaled 128,064 lbs., worth $93,916, as against 315,714 lbs., worth $251,278, during July, 1931.

—o—

Chemical Supply Co., Cleveland, has issued a folder describing its complete line of sanitary specialties.

—o—

Ingersoll Steel & Disc Co., Chicago, has announced development of a two-ply stainless steel which is expected to extend substantially the use of stainless steel in industry.

ELKO

COLORODORS
for
Para and Naphthalene

. . . . . new low prices!

Lower cost raw materials have resulted in lower prices for the famous ELKO COLORODORS—also in increased strength. They are concentrated combined Perfume and Color bases, especially prepared for use in paradichlorbenzene and naphthalene products. They are absolutely soluble insuring uniformity.

For Deodorant Crystals: Mix only one-quarter ounce of COLORODOR for each pound of paradichlorbenzene or naphthalene. To each pound of perfumed and colored crystals, mix one-eighth ounce of light magnesium carbonate to prevent caking.

For Deodorant Blocks: Add one-quarter ounce of COLORODOR to the pound of paradichlorbenzene or naphthalene. The material can then either be pressed or melted and moulded as desired.

SERIES P. D. 1
for high quality products
$4.50 pint $32.00 gal.

SERIES P. D. 2
for popular priced products
$2.25 pint $16.00 gal.

SERIES P. D. 3
for chain store products
$1.50 pint $8.00 gal.

COLORODORS are available in a wide variety of color and odor combinations. Let us know what odor you would like to test, also the series in which you are interested.

E. M. LANING CO.
INCORPORATED
Main Office and Laboratories: 433 Stuyvesant Ave.
IRVINGTON NEW JERSEY
Phone: ESsex 2—8433
New York Office
130 Pearl Street

Say you saw it in SOAP!

FOR YOUR PROTECTION—

The primary purpose of The Entomological Testing Laboratories, Inc., is to make available to the insecticide manufacturer and bulk insecticide buyer a testing service devoted wholly to insecticides.

Entomological testing by the Peet-Grady method and complete chemical examination of insecticides are now available.

We invite the cooperation of manufacturers and buyers to make this laboratory a useful adjunct of the insecticide industry.

Charges are moderate, and our completely equipped and expertly directed Laboratory is at your disposal.

ENTOMOLOGICAL TESTING LABORATORIES, INC.
114 E. 32nd Street New York, N. Y.

The Modern Insecticide

Uniform—Dependable—Quick

Insecticide users have learned to demand a product which will act quickly, kill certainly and which shall be uniformly dependable. To satisfy this demand, a new type of insecticide has been developed which acts more quickly and kills more certainly than any natural product does. In addition, it is free from the inescapable variations of natural products.

LETHANE 384

satisfies every insecticide requirement. It is safe and sure in its action. It kills more rapidly. Most important of all, it does not vary from lot to lot. Lack of uniformity will injure the reputation of your product more seriously than any other factor. Eliminate uncertainty. You can depend upon Lethane 384.

Röhm & Haas Co., Inc.

222 West Washington Square, Philadelphia, Pa.

Say you saw it in SOAP!

German Fly Sprays

(*From Page* 87)

droxyethyleneamine oleate and 100 parts of water. However, such a fly spray is no longer as toxic as the original mixture.

—o—

Opportunities for Export

The following opportunities for export of American soaps and allied products have come to the Bureau of Foreign and Domestic Commerce, Washington, D. C. American manufacturers can secure the full details of the inquiries by communicating with the Bureau, care of the Department of Commerce. Be sure to mention the number of Foreign Trade Opportunity in writing.

*552	Textile soaps	Netherlands	Agency
*595	Pyrethrum extract	Germany	Purchase
*608	Metal polish	India	Agency
†623	Medicated and toilet soaps and toilet preparations	Canada	Agency
†657	Polishes and cleaners	South Africa	Agency
*696	Liquid insecticides	Sumatra	Purchase
†752	Toilet preparations	Canada	Agency
*806	Pyrethrum extract	Cuba	Purchase
†833	Toilet soaps	Philippines	Purchase
*915	Toilet soaps	Portugal	Agency
*1020	Dye soaps	Ecuador	Sole agency
*1022	Laundry soap	Haiti	Agency
†1089	Floor and furniture polish	Egypt	Agency or purchase

—o—

Lancaster Iron Works, Lancaster, Pa., has issued a folder describing the new Eirich counter-current rapid mixer.

—o—

Handling Soap Base Tax

(*From Page* 85)

Incidentally, it will be interesting to manufacturers and others who have written to the Bureau of Internal Revenue at Washington for a ruling, to know that an accumulation of 75,000 inquiries at the office of the Bureau is reported.

—o—

Editorial

(*From Page* 81)

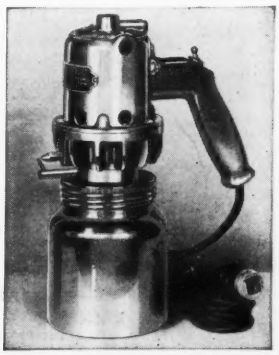
finished liquid soaps and shampoos sold in bulk for repacking, should be adopted by all manufacturers. We suggest for the sake of uniformity that the soap manufacturer pay the tax of five per cent on sales of base and bulk soap, and that the "last manufacturer" or packager of the finished product also pay the tax on his selling prices, deducting the amount paid by the original manufacturer. The adoption of this uniform practice would aid greatly in clearing up a cloudy situation in the trade.

Increase The Sale Of Your Products With Breuer's TORNADO Electric Sprayers

You can increase the sale of your insecticides by supplying your customers with the proper method of application.

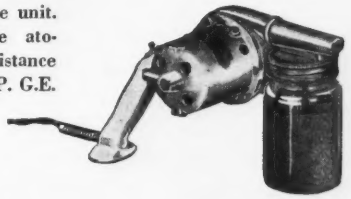
TORNADO Electric Sprayers lead the field. Thousands in use. New developments and improvements in design and construction place TORNADO Sprayers far in advance of out-of-date methods, insuring satisfactory application and encouraging the more frequent use of your product.

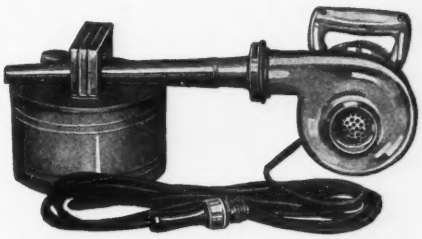
There is no line so complete or that embodies so many exclusive and modern features of sprayer design and operation. Three models—see illustrations and descriptions below.



Model 53 new Compressor Type unit. Will break insecticide into *finest* mist and gas formation mechanically obtainable. Floats throughout spraying area for many minutes—a truly de luxe model! ⅛ H.P. G.E. Universal Motor. 1 quart metal container. 20′ of rubber covered cable.

Model 50 Fan Type unit. A fine insecticide atomizer. Sprays distance of 8′ to 10′. ⅛ H.P. G.E. Universal Motor, 1 pint glass jar. 20′ of rubber covered cable.





Model 6 Fan Type unit. Will break insecticide into a very fine mist. Sprays 18′ to 20′. ⅓ H.P. G.E. Universal Motor, Norma Ball Bearings, 1 gallon metal container. This model is for larger institutions, warehouses, industrials, etc., and is also highly recommended for moth-proofing solutions.

Write today for complete description and circulars.

BREUER ELECTRIC MFG. CO.

862 Blackhawk St. Chicago, Ill.

the new standard shipping and pouring package for

LIQUID SOAPS
DISINFECTANTS
REMEDIES
SPRAYS

The POR-PAIL

The combination steel shipping and pouring drum that has been so widely adopted by manufacturers of soaps, sprays and sanitary products. It ships without boxing or crating, guarantees liquid-tight security at all times and gives the customer a more convenient and useful container. Pouring is very accurate, smooth and steady, entirely eliminating choking, gushing and dripping. When drained, cover is pried off so that the empty pail may be used. There's a great advertising tie-up in this utility feature if the pail is attractively and durably lithographed. Request prices for the black enamel, solid color or lithographed finish.

WILSON & BENNETT MFG. CO.

General Offices
6528 S. Menard Ave.
CHICAGO

Eastern Division
455 Third St.
Jersey City, N. J.

Southern Division
2119 Poland St.
New Orleans, La.

Steel Pails and Drums 1 to 65 Gallons

VOGEL

A substantially constructed sprayer that will stand up under hard usage, priced at a remarkably low figure.

SPRAYERS

Regular hand type, also continuous. Sturdy, well designed. The greatest value for your money in sprayers.

CANS

Standard stock sizes for liquid insecticides and disinfectants. Plain or lithographed. A gross or a carload. The standard insecticide container.

Deodorizing Block Holders
Shaker Top Cans for Para

Plain stock types or specially lithographed

WILLIAM VOGEL & BROS., Inc.
37-47 South 9th St. **Brooklyn, N. Y.**